je Kining Journal,

RAILWAY AND COMMERCI FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2183.-Vol. XLVII.

LONDON, SATURDAY, JUNE 23. 1877.

SUPPLEMENT. PRICE SIXPENCE. PER ANNUM, BY POST, &1 40.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER, No. 1, FINCH LANE, CORNHILL, LONDON, E.C. ESTABLISHED 1842.

BUSINESS transacted in a descriptions of Mining Stocks and Shares (British as Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellinos, Insurance, Assurance, Telegraph, Shipping, Canal, Gas Water, and Dask Shares.

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BUSINESS in COLLERY and IRON Shares, and in the principal WAGON and MATTACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

BUSINESS in all the principal COTTON SPINNING Shares.

BUSINESS in all the principal COTTON SPINNING Shares.

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MINES INSPECTED.

Bankers: City Bank, London; South Cornwall Bank, St. Austell.

Special Dealines; in the following, or part:—

SArgentine, £4½.

Argentine, £4½.

Clementine (off. wd.)

Clem

BUSINESS also on hand in Bodidris, Belstone, Gesena Sulphur, Cedar Creek, Cargoll, Denbighshire, East Craven Moor, D'Eresby, Gorsedd and Merllyn, Grogwinon, Lisburne, Last Chance, Minera, Mediyn Moor, New Zwaland Kapanga, Oakham Collieries, Pennant, Pandora, Port Phillip, Plynlimmon, Sauta Barbara, Bouth Aurora, St. Harmon, Tecoma, Wheal Newton.

50 North Laxey, 21s.
20 Patteley Bridge, £2 1 3
30 Pestarena, 3s. 9d.
30 Parrys Mountain, 9s. 3
50 Penstruthal, 9s. 9d.
31 Pennerley, 5s.
10 Roman Gravels, £10¼
35 Rookhope, 21s.
20 Richmond, £6 4.
10 8t. Harmon, £2½.

"." Shares sold for forward delivery (one, two, or three months) on deposit of 20 per cent.

FOREIGN BONDS - ARGENTINE - EGYPTIAN-RUSSIAN, TURKISH. SPANISH, PERU

SPECIAL BUSINESS in the above, and Fortnightly Accounts opened on receipt

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* SPECIAL BUSINESS in the following SELECTED SHARES:—

Central		26,	per ce	10,	10	Bi	yers	٠,	Bellers,
Freenacres	***	00,							£ 256
reen Lane			00			***	074		273
		80,	20,	5,	15		31/4		3%
	***	25,	30,	25,	20	***	60		65
Oldham Twist		32,	26,	12,	15	***	1736		2214
Royton		80,	20,	10,	10	***	2		236
shaw		20,	16,	10,	16		21/		21/4
star		25,	20.	8.	14	***	21/		234
Windsor	:	26,	20,	10,	16	***	216		3

NOTE.—The shares of good Cotton Spinning Companies pay remunerative di lends, the mills being almost entirely conducted on the Co operative System ander the Limited Liability Acts. With a revival in trade the present rate lividends would be augmented.

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| Information and advice as to operations at the present municate. | FOR SALE, at prices annexed: | FOR SALE, at prices annexed: | To Frontino. | 10 Almada, 8-4. | 10 Frontino. | 10 Fron 60 Parys Mount., 9s. 6d. 10 Roman Grav., £10½. 25 Richmond, £8½. 70 Rookhope, 22s. 50 San Pedro, 14s. 6d. 20 Sierra Buttes, £2½. 25 South Aurora, 4s. 6d. 15 Tankerville, £7½. 30 United Mexican, 8ss. 5 Van, £34½. 25 Van Consols, 19s. 8d. 20 West Assheton, 18s 6c. 20 West Assheton, 18s 6d 40 Wheal Grenville. 25 West Tankerville, 21s.

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Exchequer, East Van, South Cwmystwith, Aberdaunant, East Chiverton, Chicago,
Pennant, Yorke Peninsula, D'Eresby, Holmbush, Cathedral, Trebeigh Consols,
Rey, Santa Barbara, Marke Valley, Cambrian, North Cornwall, Argentine, Blue
Teni, Belstone, Prince of Wales, Clementina, Wheal Newton.

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Aberdaumant, 138, 4d. Glernoy, 24s. 6d. Glernoy, 24s. 6d. Pandora, 22s. 6d. Pan Penstruthal, 9s. 6d. Pandora, 22s. 6d. Parys Mountain, 9s. 6d. Rookhope, 21s. Roman Gravel, 2014. So. Roman Gravels, 8s 6 Tankerville, £714. Holmbush, 31s. 9d. Leadhilly, £6½. Ladywell, 18s. 9d. Laturwst, £2 18s. 9d. Marke Valley, £1½. Monydd Gorddu. North Laxey, 21s. Pateley Bridge, £2. Pennerley, 4s. 9d. Exchequer, 7s. €d. Bodidris.
Combellack,
Combunartin, 7s. 6d.
Derwent, £:½.
Devon Consols, £4¼.
East Van, £5½.
Grogwinion, £3%.
Great Laxey, £20%.
Argentine, £4¼.
Cedar Creek, 10s.
Condes of Chili, 56s. 6d
Chicago, 48s. So. Roman Gravels, 8s 6 Tankerville, £7½. Van Consols, 20s. West Assheton, 17s. 6d West Tankerville, 20s. West Chiverton, £15½. Pennerley, 43. 9d. Exchequer, 7s. 6d. Flagstaff, 51s. Frontino, £2½. I.X. L., 8s. 6d. Javali, 7s. 9d. Last Chance, 8s. N. Zealand Kap., £2¾. New Quebrada, 38s. Port Phillip, 10s. Richmond, £63%. San Pedro, 16s. 3d. South Aurora, 4s. 9d. Tecoma, 7s. 6d. United Mexican, 41s. Condes of Chicago, 48s. Chicago, 48s. Chontales, 8s. 6d. Don Pedro, 9s. 6d. Eberhardt, £7 6s. 3d.

Eberhardt, 27 6s. 3d. N. Zealand Rap., 22%. United Mexican, 4ts. Consols, Foreign Bonds, Railways, Bank, Telegraph, Gas, and all miscellaneou Shares bought and sold, and fortnightly accounts opened for same. Shares sold for forward delivery on receipt of cover. List of prices and every information for warded on application. References given and required when necessary.

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TACLACIA	-/3.00	- 7A	were you was constituted and a constitute of	e-01 111	
Devon Great Consols		43/4	Pateley Bridge	11/2	2
Dolcoath	30	32	Pennerley		
Don Pedro	8s	10s.	Penstruthal		10s.
Eberhardt	7	736	Richmond	61/8	63/8
East Caradon	834		Roman Gravels	10	1056
East Van	δ	51/2	Rookhope	20s	228.
Exchequer Gold	6s. 3d	8s. 9d.	San Pedro	7s. 6d	10s.
Flagstaff			South Condurrow	736	8
Glenroy			Tankerville	714	734
Glyn	7/2	11/8	Tincroft	14	16
Great Laxey			Van	34	36
Javali		98.	Van Consols		1
Last Chance		10s.	West Assheton	3/8	3/8
Ladywell	1	136	West Chiverton	15	16
Leadhills	6	634	West Tankerville	1	11/4
Marke Valley	1	11/4	W. Grenville (call pd.)	11/2	134
			, Llanrwst, Rookhope, N		ev. and
Garandd and Merllyn.	The latte	er mine	is now extraordinarily	rich in le	ad ore.
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The sales, already 50 ton	s ber mor	mi, are	toons to be materially men	enserge w	rouders
will have immediate an	d good di	vidends			

M ESSRS. ENDEAN AND CO., STOCK AND S DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.

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Condes of Chill.
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40 Rookhope, 21s.

7s. 3d. 10 Roman Grav., £10 1 3

7s. 3d. 10 Richmond, £6½.

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d. 10 Tankerville, £7 11s. 3d

;. 40 Van Consols, £%.

25 W. Tankerville, 21s 3d

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BILINIES IN ...
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76 Parys Mountain.

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100 Don Pedro, 9s. 6£.

40 Pateley Bridge, £2¼.
50 Pennerley, 6s.
30 W. Tankerville, £1¼.
80 Bampfylle.
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Those who availed themselves of the information contained in the last edition of this carefully compiled work may be congratulated upon the result of their investments.

investments.
The Stocks recommended were—Direct Cable, at £7½; Gorsedd and Marllyn,
£2½; Great Eastern, £42; South Condurrow, £5½; Minera, £10—and a glance
at the present quotations will show the advance which has since taken place in

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ADMINISTRATION AND ARE PREPARED TO GRAIN THE VARIOUS IONAL STOCKS and Shares at close prices. Orders per post or telegraph resive prompt attention.

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55 EAST VAN do 150 PAN 10RA. do 1
50 ELGAR do 50 RED ROCK do 1
50 GREAT DYLIFFE do 158 ROTH CONDURROW. TIX.
50 GREAT DYLIFFE do 158 ROTH CONDURROW. TIX.
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SECTION II.

PROSPECTING FOR MINERALS-BORING.

III .- THE BORING OPERATION. REMOVAL OF HINDRANCES WHICH OCCUR OR ORIGINATE DURING THE BORING.

As this method of boring with the simultaneous insertion of the lining cannot always be carried on successfully from beginning to end, it is most advisable to commence the bore hole of a large diameter, and carry it down as far as it is likely that the lining will readily follow, and then to continue the bore hole again of a smaller diameter, and carry it down as far as it is likely the second lining (which will reach through the first lining to the surface) will readily follow.

diameter, and carry it down as far as it is likely the second lining (which will reach through the first lining to the surface) will readily follow.

When a bore hole has served its purpose, and is about to be abandoned, if it has been lined it may be worth while to extract the lining, which if it fits very tightly in the bore hole must be cut. This cutting of a lining may also be necessary in ordinary boring operations, when owing to pressure on the outside, or the application of too great a force in inserting the lining, the latter has been bulged in, and the lining fits too tightly to be withdrawn in one set, the withdrawal being necessary to change the damaged portion. Such a necessity is, fortunately, very rare in boring operations.

The cutting of the lining in a bore hole takes place occasionally both in a horizontal and vertical direction; it is evident that the boring rods will be more severely tested in the former case.

For cutting the lining in a bore hole in a horizontal direction, M. Dégoussée has frequently used the enlarging borer, provided with suitable cutters, which we have mentioned previously as designed by him for enlarging a bore hole beneath the lining. In this case the cylinder has a tapped hole on its under surface, into which

with suitable cutters, which we have mentioned previously as designed by him for enlarging a bore hole beneath the lining. In this case the cylinder has a tapped hole on its under surface, into which a set of rods are screwed, which reach to the bottom of the bore hole, so that in case the rods above break, owing to the great force of the torsion exerted, the apparatus is prevented from falling to the bottom of the bore hole, when a set of rods with left-handed screws might be necessary to enable the rods to be twisted sufficiently quick to cause the cutters to fly back into their seats, so as to allow of the apparatus being raised.

M. Dégoussée has also devised two other somewhat more complicated instruments for cutting bore hole linings horizontally. The first of these which we shall describe consists of a very strong iron rod, the upper end forming a screw, by which it is attached to the shaft rods; the lower end forms a sort of flat piston, about \(\frac{3}{4}\) in less in diameter than the lining. On to the under side of this piston two nearly semicircular plates are bolted; to one of these plates a long stiff rod is attached, the lower end having a tapped hole, into which the supporting rods are screwed. The other plate has a slot init, sufficiently large to allow of the cutter working in it. The cutter is centred on a bolt passing through the piston and plate: the end of the cutter opposite the cutting edge is formed as a curved tail. Against the side of this tail a stiff and powerful spring presses, the lower end of this flat spring being botted to the rod (attached to the other plate) just above where it is swelled to be tapped to receive the lower rods. The flat spring pressed the tail of the cutter in such a direction that the cutting edge is forced tightly against the lining.

The second instrument is designed so as to be suitable for boring the lining.

The second instrument is designed so as to be suitable for boring holes of different dimensions. It consists essentially of two arms, hinged at their lower ends, and carrying at their upper ends two separate halves of a circular blade, or saw, and of a wedge, by means of which the two semicircular halves of the saw are torced apart against the sides of the lining. The wedge consists of two long flat pieces of iron, about 1½ in. thick, and tapering from 7 in. in breadth at the upper to 2 in. in breadth at the lower end. These plates are welded to a cross piece (2 in. thick and 4½ in. high) at their lower ends, and at the upper end to a strong shaft, which has a screw at its upper end, by which the apparatus is attached to the shaft rods. These two flat plates are thus held about 5 in. apart. On the broad outsides of each of these plates two grooves are cut near to and parallel to the tapering edges. The two semicircular saw blades are each bolted between two massive plates, or blocks, and above and beneath and bolted to these plates are four other guide plates, cut to a smaller radius than the saw blades. Each of these four guide plates is in the shape of a sector of a circle, the angular corners being prolonged and bent (or slotted to this shape from a larger plate) round in the form of a square hook, so as to fit the grooves cut in the flat wedge plates, so that when they are at the upper broader end the two halves are further apart than when at the bottom. The two under guide plates are attached respectively to the two hinged arms. One of these arms is prolonged somewhat past the joint, and is swelled out, so as to allow of a hole being made and tapped, into which the lower supporting rods are screwed. The topmost of the shaft rods terminates in a long screw, a The second instrument is designed so as to be suitable for boring being made and tapped, into which the lower supporting rods are screwed. The topmost of the shaft rods terminates in a long screw, which has a lever, or handle, attached to the end, and by which the rods and apparatus are rotated. The handle and screw form an arrangement similar to that of a ratchet brace; so that when a nut on the screw is held tight the rods are not only rotated but lowered. In using this apparatus, the necessary length of lower supporting In using this apparatus the necessary length of lower supporting rods are first lowered partly into the bore hole, so that the sawing or cutting apparatus can be attached. This is done with the guide plates, &c., at the lower edge of the wedge, and a sufficient length of upper shaft rods are then attached so as to reach the surface or upper snatt road are then attached so as to reach the surrace, when by holding the nut fast, and rotating the handle, the wedge is lowered so far that the saw blades press against the lining. By holding or slackening the nuts the pressure of the saw blades against the lining, and consequently the force required to rotate the apparatus, can be regulated. The lower end of the supporting rods has a pivot plate attached to it, which allows of the torsional strain on the lower supporting rods heing reduced to a minimum. The on the lower supporting rods being reduced to a minimum. The working of the apparatus is exactly the same as that of an ordinary ratchet brace, and will be evident at once.

If from any reason it is impossible, or unadvisable, to have lower

supporting rods, the two guide plates, with the semicircular saw blades, can be supported from a special set of rods from the surface, ending below in a fork, to the two sides of which the upper guide plates are attached.

The following is a simpler but hardly so practicable arrangement. To the lower end of the shaft rods a short stiff rod is attached, to which two long arms are hinged; the lower ends of the arms carry the two semicircular halves of the saw blade, which is stiffened on its upper and under sides with thick plates. A strong wroughtirol bridle, rectangular in horizontal section and trapezoidal in vertical section, with the broaderend downwards, embraces the two arms. tical section, with the broader end downwards, embraces the two arms. A strong wrought-iron wedge is fixed across the bridle, so that two rectangular slits are formed between the wedge and the ends of the bridle, one on each side of the wedge. The two arms carrying the saw fit in these slits, so that the bridle can be slid up and down on the arms, in the first case causing the saw blades to recede, and in the second to approach each other. The bridle is attached to a long fork, the upper end of which screws into a special set of rods, reaching to the surface.

the upper end of which screws into a special set of rods, reaching to the surface.

For cutting a lining in a vertical direction each of these instruments can be used, only in this case the saw blades, or cutters, must be placed vertical. A much simpler arrangement is preferable, and may suffice, like the following, which consists simply of a steel bow. The back of the bow and the cutting edge, or saw, are welded together above and below, the upper end terminating in a screw, by which it can be screwed on to the shaft rods, and the lower end forms a nut, into which the lower rods are screwed. Both the back and the bow of the saw are curved outwards; the spring of the steel bow, although not sufficiently strong to prevent the lowering of the apparatus in the lining without difficulty, suffices to press the cutting blade with a suitable force against the lining to ensure the cutting through of the lining when the apparatus has been repeatedly raised and lowered. Sometimes a special spring is inserted between the back of the bow and the blade.

When it is necessary to cut a lining the operation should always be commenced at the upper end of the lining, and as each part is cut loose it is raised to the surface before proceeding with the next. Corre Bornes.—Although there is in general no difficulty in ascertaining from the sludge or debris brought up from the bottom of a bore hole the character of the strata passed through, still under certain circumstances it may be not only doubtful but even misleading, when fallings-in from strata already passed through fowing to a softening of the strata or influx of water, or of the strata being quick) have taken place, and being pounded and mixed with the

or a nore noise the character of the strata passed through (owing to a softening of the strata or influx of water, or of the strata being quick) have taken place, and being pounded and mixed with the debris from the strata at the bottom of the bore hole in larger or smaller quantities, give it quite a different appearance. Indeed, cases have already happened where the boring tool has passed through coal without its being observed; and, on the other hand, when in passing through bituminous shales the existence of a bed of coal has been taken as a fact, only to be disproved on sinking to it. To obviate these disadvantages and risks core boring has been introduced, and is so called because its object is to bring up solid cores for the strata passed through, by which means unmistakeable proof is obtained of the character of the strata. This core boring consists of two operations—the formation of the core at the bottom of the bore hole by boring round it, and the detaching and raising of the core to the surface. Perhaps the best arrangement for core boring is that of Capt. Beaumont. The machine, however, will be described under the head of "Hydraulic Boring."

As the borer for boring round a core is the same in principle for all boring apparatus—to give the cutters an annular arrangement, some of the cutters being placed radially, and some on the periphery. —we shall only describe that of Herr Kind, devised as early as the year 1848, and which can be used with rigid rods, with or without the free falling apparatus and with a rope. This apparatus consists of a long fork, on the upper end of which a screw is formed, by which it is attached to the shaft rods; the lower end forms a hollow by the first of the cutters are slightly broader than the thickness of the cylinder, so that the latter is not likely to get jammed between the core and the sides of the bore hole. The fall of the borer is much less by core thoring than otherwise, and the blows are given with a proportion tately greater rapidity. After the core has att

settle down and harden.

The core graphel used by Herr Kind consists of two parts—along cylinder, and a long rod terminating at the lower end in a fork, to which a heavy ring is attached. The cylinder is provided with three long vertical slits, to allow of the passage of the fine slime. Near the bottom of the cylinder are four slits, about 1½ in. long and ½ in. wide, and at the same level a strong ring is rivetted to the cylinder on the inside. To this ring four spade-shaped cutters are hinged. The cylinder is attached to and lowered by means of the shaft rods, and the long rod, with the heavy ring, is lowerel by the means of the sludger rope. Of course, it will be understood that the interior diameters of the apparatus are large enough to allow of their readily passing over the core. The four spade-shaped cutters are bent inwards at the top, so that when the heavy ring is lowered down to the cutters they are forced inwards against the core, during which the cylinder is raised and lowered repeatedly about 3 in. and at the same time is gradually rotated until the core is so far reduced in diameter at the bottom as to break off readily when some force is exerted to raise the cylinder, and the core, that when some force is exerted to raise the cylinder, and the core, that rests on the cutters, is brought to the surface.

Herr Zobel, whose free falling apparatus we have already described, makes use of the following arrangements for raising cores. It consists of two long arms, which are forked at their extreme ower end. These two arms are forged in one piece, which is bent orizontally in the middle (at the upper end), joining the two arms. lower end. horizontally in the middle (at the upper end), joining the two arms. In this horizontal portion is a tapped hole, through which a long screw passes, being attached at the upper end to the shaft rods, and ending below in a swivel joint, or hinge. To this two short arms are hinged, and each of these joins the end of one of two long arms, which cross each other (like scissors), being centered on a pin passing through the first pair of arms. The lower ends of these crossed arms are bent inwards. When, therefore, the rods are rotated, and the screw is raised, the upper ends of the crossed arms are drawn inwards, and consequently the lower ends are also drawn together in such a and consequently the lower ends are also drawn together, in such a manner as to lay tight hold of a core, or anything between them. This instrument is also used by Zobel for raising broken pieces from described for this purpose can be equally well applied to raising of cores as core grapnels.

Rope Boring, or Chinese Method of Boring.—It will be at once evident that with the use of rigid rods a great amount of time must be spent in screwing and unscrewing the shaft rods every time it is necessary to raise or lower them for the purpose of shulging the bore hole, and that while the time required for boring a given advance in rocks of nearly the same hardness continues approximately the same for any depth, yet the time occupied in raising and lowering the rods (which must, therefore, be first unscrewed, and then screwed together, requiring four to five hours for a depth of from 500 to 600 yards) increases with the increased depth of the bore hole, and when the hole becomes very deep the time required in merely raising and lowering the rods becomes much greater than that occupied in the actual boring and sludging operations. In fact, supposing we represent the total cost of the preliminary and by work connected with the sinking of a bore hole by A, and the average cost of the boring and sludging of the advance made between two successive sludging operations by b, and the cost of the first screwing and unscrewing of the rods by a, and lastly the approximate cost of screwing and unscrewing the rods reduced on the advance made between two successive sludgings by d, then if a represent the quotient of the total depth of the bore hole divided by the amount of advance between two successive sludgings, the total cost, C, of the bore hole is given approximately by the equation— $C = A + nb + \begin{cases} 2a + (n-1)d \end{cases}$

$$C = \Lambda + nb + \left\{ 2a + (n-1) d \right\} \frac{n}{2}$$

From the above expression it is evident that the cost of a bore hole where rigid rods are used depends not only on the depth, but part of the cost increases as the square of the depth; where a rope is used, however, that portion of the cost is greatly diminished—the entire time occupied in screwing and unscrewing the rods (which forms the greater part of the total time occupied in raising and lowering the rods) is saved, and, besides, the velocity of raising and lowering can be greatly increased. Generally, from eight to ten minutes will sufflee for raising and lowering the cutter with a rope. The above, however, may be said to be the sole advantages which the use of a rope possessed above that of rigid rods, especially when compared with the effects obtained by the use of the best free falling apparatus.

It he above, however, may be said to be the sole advantages which the use of a rope possessed above that of rigid rods, especially when compared with the effects obtained by the use of the best free fall in apparatus.

The rotation of the cutting tool cannot be effected so regularly, which in its turn leads to great irregularities in the contour of the good body of the body of the best free fall in a stop to boring unless the sides were smoothed and rounded off with after cutters; besides, the boremaster cannot so readily perceive the rotation and these in the strata met with, or any obstruction, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the tiller or handbrace of the rigid rods, as when he has his hand on the rigid rods must still be provided. To fulfil all the requirements for boring a sufficient flexibility to pass over a convenient sized drum or pulley be sufficiently still to prevent any extension or contraction, or arbitary rotation, which latter, however, is only partially provided against by the use of a flat rope, the former evil still remains, so that when the bore hole is very deep there will always be a great uncertainty as the base of a flat rope, the former evil still remains, so that when the bore hole is very deep there will always be a great uncertainty as the second remains and the hand has been called the Chinese method, on account of having been, according to some, first introduced from C

took a journey into the district, and wrote back about 1831 to the Superior of the Missions at Paris, stating that he had seen and verified by measurement his previous report.

In 1832 M. Sello, Conseiller des Mines, devised an instrument for boring with a rope, and succeeded in sinking in the neighbourhood of Saarbrücken a great number of bore holes through the Bunter Sandstein (variegated sandstone) overlying the coal measures, some of them having a diameter of 18 in., and a depth of 80 yarls. Unfortunately, the great publicity given to these trials caused the application of this system in a great number of other places, where the failure was so great as to bring the system into general discredit. The operation of boring with a rope depends on the fact that a weighted rope uncoils or untwists itself; and, on the contrary, a rope from which the weight is suddenly taken coils itself, so that if a swivel be inserted between the rope and the borer, then whilst the

rope from which the weight is suddenly taken coils itself, so that it a swivel be inserted between the rope and the borer, then whilst the borer is being raised the rope untwists itself, and imparts a rotatary motion to the borer, in so far as the friction between the swivel and the upper end of the borer is greater than the torsion of the rope. According to Imbért, the rope used in China was only about the thickness of a finger, and made by hand from bamboo fibres. M. Sello, at Saarbrücken, made use of hemp as the material for his rope. Aloe fibres have also been used. M. Jobard recommended an iron wire rope with hempen strings intertwined. A flation wire

rope. Also fibres have also been used. M. Jobard recommended an iron wire rope with hempen strings intertwined. A flatiron wire rope was used at Ehrenbreitstein in 1834, and a round iron wire rope was used at Chemnitz, in Hungary, in 1843.

The apparatus used by Jobard consisted of a cast-iron cyliader about 8 in. in diameter, and 3 ft. 4 in. long. The outside surface of the cylinder was fluted, in order to allow the debris and slime to rise between it and the sides of the bore hole. The upper end of The upper end of the cylinder forms an empty inverted cone, in which the fine slime settles, and the lower end is cast in the form of a crown borer, in a chilled mould, to make the cutting edges sufficiently hard. A long wrought-iron rod passes through the centre of the cylinder, the

" For the benefit of some of our readers it may be well to state that the term $\left\{2a + (n-1)d\right\} \frac{n}{2} \text{ is the expression for the sum of an arithmetically progressive series of which the first term is <math>a$, the second a + d, the third a + 2d, and lower end being atts bore hole make the larger that of necessi lining) th

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rope some saily hut edge was a hole, and ordinary of the boil with the fall of the some as the fall of the total rore and fall of the fall of the some as the fall of the fall

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ing Notes on a Course of Lectures on Mining, delivered by Herr Bergrath, π GRODDECK, Director of the Royal Bergakademie, Clausthal, The Harz, Germany.

1877

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lover end being provided with a conical steel point, the upper end lower end being provided with a conical steel point, the upper end being attached to the rope. When it was necessary to continue a being attached to the rope. When it was necessary to continue a being attached to the proper of the same time, in order to hore hole after it had been lined, or at the same time, in order to hore hole of the original width (and, therefore, make the tool cut the hole of the original width (and, therefore, make the borer which was afterwards used, and which must larger than the boremwhat smaller than the inside diameter of the fining) the tool was not suspended vertically, but by attaching the lining) the tool was not suspended vertically, but by attaching the lining) that aside from the centre of the support the tool necessarily hung somewhat askew, and, consequently, the lower cutting sarily hung somewhat askew, and, consequently, the lower cutting edge was eccentrically placed with regard to the axis of the bore dege was eccentrically placed with regard to the axis of the bore hole, and so cut the bore hole of a diameter larger than itself. The hole, and so cut the bore hole of a diameter larger than itself. The ordinary chief borer was not found to answer very well at Saar-bricken, on account of the difficulty of obtaining a regular rotation of the borer.

bole, and some chief borer was not found to answer very well at Saarordinary chief borer, on account of the difficulty of obtaining a regular rotation
of the borer.

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Mr. Sello, for the surface apparatus used by the Chinese for causing the rise
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and fall of the cutter consisted of a long spring pole, essentially the
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of the power and the borer.

The late Bergrath H. Lottner, Professor of Mining at the Berlin
Mining Academy, sumsup the disadvantages of this method of boring
as follows:—1. The impossibilit

of rope norms, seconding general, and difficult the invention of Measrs, Mather and Platt the bore hole (spring) in the garden of the Ecole Militaire at Paris was the deepest (600 ft.) known bore hole executed by this method of boring with a rope.

UNIVERSITY OF OTAGO.

UNIVERSITY OF OTAGO.

Although a university founded less than ten years ago cannot be expected to rank in importance with those established long previously, and in localities where the demand for higher education is naturally much greater than in a young and rising colony, the founders of the University of Otago may well be congratulated upon the position the institution has already attained. The University was founded in 1869 by the Provincial Council, with the intent "to promote sound learning in the Province of Otago," power being at the same time given to grant degrees in Arts, Medicine, and Law, whilst by way of endowment 100,000 acres of pastoral land. It was opened in the year 1871 with a staff of three professors in arts, and in the following year the Provincial Council voted to the University affurther endowment of another 100,000 acres of pastoral land, which gave an accession to its revenues which permitted considerable additions to the staff of professors and lecturers in the faculty of arts, and enabled the University to establish a lectureship in law, and to lay the foundations of a medical school. In 1874 an agreement was made between the University of New Zealand and the University of Otago, restricting the former to the examination of candidates for matriculation, scholarships, and degrees, and binding the latter to

made between the University of New Zealand and the University of Otago, restricting the former to the examination of candidates for matriculation, scholarships, and degrees, and binding the latter to become affiliated to the University of New Zealand to hold in abeysmeet its power of granting degrees, and to waive the claim which it had advanced to a Royal Charter. As a result of the agreement thus effected, the University of Otago became possessed of 10,000 acres of land which had been set apart for university purposes in the former province of Southland. As the University purposes in about 328 aquare miles of land, it can scarcely be doubted that with judicious management a revenue will ultimately be secured, which will make it a highly prosperous establishment.

The University is entirely unconnected with any religious denomination, contains no faculty of theology, its instruction is purely secular, and it is restrained by its constitution from imposing any religious tests upon its professors, lecturers, or students; yet in addition to the endowments already mentioned it receives the benefit of certain educational funds held in trust by the Presbyterian Church of Otago. The professorship of Mental Science was endowed from this source, and it has lately been intimated to the University Council that the funds are now in a position to support another chair. The supreme governing body is the Council, the members of which hold office for life; vacancies being filled up by the Visitor—his Excellency the Governor of the Province. The Chancellor, at present Mr. Henry S. Chapman, and Vice-Chancellor, the Rev. Dr. D. McNaughton Stuart, are elected by the Council, out of their own body, for three years; and the conduct of the educational arrangements of the University is committed to the Professorial Board, which includes all professors and such lecturers as have been appointed members of it by the Council. The University contains a Faculty of Arts; a School of Medicine, and a School of Law. The Arts lectures are arran radions of schoolmasters, and in Law, for the professional examinations of schoolmasters, and for degrees, senior scholarships, and honours in the University of New Zealand. The arrangements in the Medical School are such that attendance at the lectures counts in the home schools and the Law lectures prepare for the professional examinations before the Judges of the Supreme Court, and in conjunction with the classes in the Faculty of Arts for the LL. B. degree of the University of New Zealand.

The establishment of a School of Mines in the University has on Strend occasions began under the conjunction of the Courties of the Courti

several occasions been under the consideration of the Council; and will, no doubt, ere long be effected. As to the utility of such a school in a province like New Zealand where the mineral resources are enormous, and everything is to be hoped for from their economic development there can be but one opinion, and as the University of Otago, a well arranged museum, a good chemical laboratory, and some science classes connected with the Arts curriculum it could no doubt be economically conducted. The chemical laboratory, under the charge of the Professor of Chemistry, is conveniently fitted up, and, on ground of public convenience, has been opened as a public analytical laboratory. In this capacity it is largely made use of for the analysis of ores, minerals, soils, fabrics, and foods, and these analyses are frequently taken part in or performed under supervision by the more advanced students. The Professor of Natural Science in the University is also Curator of the Museum, which has Science in the University is also Curator of the Museum, which has been carefully arranged, so as to be of the utmost possible practical utility. The Dunedin Hospital, in which the clinical lectures are been carefully arranged, so as to be of the utilists possible. It is utility. The Dunedin Hospital, in which the clinical lectures are debtly, has 198 beds, and the average number of in-do-r patients is properties and the second properties of the purposes of efficient instruction. The fees for the Arts course is but 32. 3s. per session, and the college fee in addition is 14. 1s.; whilst there are several liberal scholarships within the reach of the students. At present the University of Otago is in its infancy, but there can be no question from what has already been Johnston that it is well worth the while of the rising generation of New Zealand to avail themselves of the opportunity of becoming connected with it, as there is every promise that both the Univer-

sity of Otago and the University of New Zealand will at no distant ment of preference dividends can commence, and such arrears, a date occupy a prominent position amongst the educational establishments of the world.

dale occupy a prominent position amongst the educational establishments of the world.

AIX-LA-CHAPELLE POLYTECHNIC SCHOOL.—The new Calendar—that for 1877-78—of this useful Institution has just been published. The school, which was organised in 1870, has made excellent progress, and there is no question that the instruction given is of a high character, while the terms upon which it is affered are exceedingly liberal. The ordinary courses embrace algebraic analysis, differential and integral calculus, plane and spherical trigonometry, analytical and applied geometry, pure and applied mechanics, experimental, mathematical, and applied physics, organic, inorganic, and analytical chemistry, and chemical technology, machinery, and mechanism, building, and works of construction, road and railway making, mineralogy, and numerous other subjects, so that to whatever profession the student may in after life intend to devote himself he can be put through such a course as will be of practical utility to him. There is an excellent library and good museums attached to the establishment, as well as amply provided laboratories. The school is under the direction of Bauratt v. Kaven, and the teaching staff consists of 22 ordinary professors, 5 extraordinary professors, 17 lecturers, and 2 tutors. The session extends from Oct. 8, 1877, to the end of July, 1878, and embraces a summer and winter session, but students are required to enter between Oct. 1 and Oct. 6. The Calendar—which can be obtained of the director for 12 stamps—contains all the information the student can desire, and the several programmess show that every care has been taken to arrange the course so as to meet the requirements of the largest possible number. The classes commence at 7 o'clock in the morning, and continue until the same time in the evening, with an hour for dinner between 1 and 2 P.M., so that the students are not likely to contract habits of indolence, and there is a half-holiday on Saturday. During the first three years the instruction is general dents, 50 non-matriculants, and 38 hospitants, or over-nge students, so that the institution is in a highly prosperous position. It may be hoped that in future years the Calendar will not show only one Englishman to be attending the classes.

WANTED IN COLORADO-SCIENTIFIC MEN.

WANTED IN COLORADO—SCIENTIFIC MEN.

Mr. Richardson, one of our old correspondents, and whose investigations into the mines and minerals of this new Western State, and which has now engaged his sole attention for the past five years, writes us to invite the attention of Dr. Emmens, Anderson, and others, who have proved the modern humid process of reducing low-grade silver ores to be a success to this part of Colorado. He says that in a ride of three days he carshow any of our mining men over half a million tons of silver ore that will run from 15 to 40 ozs, of silver, beside carrying a little gold, and from 5 to 15 per cent. of copper. They are limestone ores generally, and very easy to work. He has analysed a large number of them, and as far as his experience has gone found not the least difficulty (after chloronation) of obtaining 92 per cent. of the produce. Next to this he wishes us to invite the attention of gentlemen who are interested in wire tramroad transportation in the many engineering works of Colorado in which he is often consulted, and in many professionally engaged, and more especially now in the Mont Bross, Mont Lincoln, and Mosquito Mountains. He has laid down plans for running the ore from the summits into the valley below, whereby a saving of 75 per cent. may be obtained by this system of conveyance. Our old friend knows what can be done, but he wants our folks to write upa simple description of their several inventions under a kind of guarantee that they would a lither promise. description of their several inventions under a kind of guarantee that they will do all they promise. Now, next week either send to Prof. C. S. Richardson, whose address is Alma Mineral Museum, Alma, Park County, Colorado, what he asks us, or give a full and lucid description in the *Mining Journal*, so that our American readers may know what we as English mining engineers are willing to offer.

YORKE PENINSULA MINING COMPANY.

At the annual general meeting, to be held on Friday next, the re-orts of the directors and manager, and the statement of accounts, fill be submitted.

will be submitted.

The directors congratulate the shareholders on the steady progress of the Kurilla Mine, which has exceeded the expectations expressed at the last annual meeting, and there is every prospect of continued progress. The working accounts of the mine show that it has made profits during the last 12 months, and is continuing to do so in an increasing degree, and this, notwithstanding the exceptionally low price of copper, but which it is hoped will improve ere long. The difference between the present price of copper and its price 12 or 15 months ago has made a difference to this company's profits for 1876 of from 2000l. to 3000l.—a sum equal to more than 5 per cent, on the whole of the preference shares of the company. The directors also desire to invite the attention of the shareholders to the very encouraging fact that whereas the ore raised than 5 per cent. on the whole of the preference shares of the company. The directors also desire to invite the attention of the shareholders to the very encouraging fact that whereas the ore raised and sold from the Kurilla Mine between April, 1875, and March, 1876, was equivalent to about 5800L, the ore sold and raised between April, 1876, and March, 1877, is equivalent to about 13,000L. These are positive and most satisfactory proofs of the profitable progress of the mine in a very short period, and, in spite of the very low price of copper, they indicate what a valuable property the company possess in the Kurilla Mine, and these results have been arrived at not by "picking out the eyes" of the mine but by working, although slowly, yet in a miner-like way, so as to open up and leave accumulating reserves to a large amount for future working. The Duryea property has been provisionally sold to the Ravenseliff Mining Company for 3000L in cash and 2000L in paid-up shares, in addition to 1-25th royalty, but the completion of the sale depends upon whether the latter company can be floated. Of the Ravenscliff

in addition to 1-25th royalty, but the completion of the sale depends upon whether the latter company can be floated. Of the Ravenseliff Company we have already formed and expressed a very favourable opinion. It has acquired properties which promise to give early returns for copper and gold, and is brought out by gentlemen who have had much experience in managing colonial mining enterprises. Independently, however, of its own substantial merits its formation, and the sale of the Duryea property to it, would be a certain and immediate benefit to the Yorke Peninsula Company.

The company commenced with only 8178. 8s. 5d. capital in money, and therefore had to raise some money on debentures at a high rate of interest. When such additional money was expended, and a confinite rest.

of interest. When such additional money was expended, and a conof interest. When such additional money was expended, and a considerable amount of interest had accrued, the company had no alternative, in order to pay off such debentures and interest, and provide funds to continue its operations, but to get the 75,000 unissued ordinary shares cancelled and create and issue the existing 40,000 preference shares. By the issue of those shares the amount of the debentures and accrued interest (the holders of them taking payment in such preference shares) was all paid off, and a further comparatively small amount of working capital provided, and it has been by the partial expenditure of such capital that the affairs of the company have since been carried forward and the Kurilla Mine brought into its present very promising and satisfactory position. brought into its present very promising and satisfactory position. But, inasmuch as the dividend on the existing preference shares is a cumulative one, arrears have necessarily accrued, which will amount at the 30th of this month to the sum of about 14,600.

ment of preference dividends can commence, and such arrears, as well as regular preference dividends, must both of them be paid before any dividend can be paid upon the 75,000 ordinary shares of the company, so that the prospect of commencing to pay dividends on the ordinary shares might be rather a remote one. Two plans have suggested themselves for the discharge of these arrears. The first being to apply the profits as they accrue, which might discharge the arrears of preference dividend in three or four years; and the second, which the directors recommend, that the company shall immediately create and issue additional preference shares (or the same footing in all respects as the existing preference shares) to the full amount (14,600*l*.) of the arrears of dividend up to the 30th of this month, in order at once to discharge it, by paying it off in such additional preference shares, and thus place the company on a free basis, so as (if the present rate of profits shall continue to progress) to enable the preference shareholders to look forward from this time to regular dividends in future; while it is hoped that, by prudent management and turning the resources of the company generally to good account, a dividend may be paid at as early a date as practicable to the ordinary shareholders likewise.

GOVERNMENT INSPECTION OF COLLIERIES.

THE YORKSHIRE AND LINCOLNSHIRE DISTRICT.

GOVERNMENT INSPECTION OF COLLIERIES.

THE YORKSHIRE AND LINCOLNSTIRE DISTRICT.

It is a matter for congratulation that Mr. Frank N. Wardell, F.G.S., is enabled to state that no such terrible explosions of gas as those he had to record in his previous report devastated the district during 1876. They were, fortunately, free from any great calamity; indeed, with the exception of the years 1807 and 1869 the death rate from explosion has not been so low for the last 10 years. The total deaths from all causes during the year was 70 in Yorkshire and 1 in Lincolnshire, whilst 61,261 persons were employed in the 549 collieries, and 15,707,143 tons of ore were raised. There was not a single accident during the year resulting in more than one death. Under these favourable circumstances Mr. Wardell's references to the accidents are not very long. He mentions, however, that in one case of explosion at Newton Colliery a man named Richard Knight went to work on the day named, and it appeared took upon himself to build "packs." To do this dirt was required to put between the packs, and he had gone into an old goaf for the purpose of getting it, taking with him a naked light. An explosion of gas followed, burning him so that he died a week afterwards. His father, who was within a few feet of him was not harmed. Mr. Wardell does not think, therefore, there had been any large quantity of gas. Men are appointed to do this work, subject to the instructions of the deputies, and on this occasion one of these men was actually sent to this very place by a deputy to build the pack. The man Knight and his father, however, would not allow him to do so, and sent him away. These men who build the packs have safety-lamps, with which, when necessary, they enter the goaf. On examination of the place it seemed that Knight must have had some difficulty to enter the goaf at all, he having first to remove a quantity of dirt, but the gain to him in building the pack, and the fact that the material which he intended to use was close at hand, seemed

the goaf. On examination of the placeit seemed that Knight must have had some difficulty to enter the goaf at all, he having first to remove a quantity of dirt, but the gain to him in building the pack, and the fact that the material which he intended to use was close at hand, seemed to have urged him on to his fate.

What he did was in direct opposition to the instructions given him by the night deputy, and in defance of rule. No gas had been reported here by the deputies who had previously examined the workings; indeed, any deputy would have had some difficulty in examining the actual scene of explosion without first removing stones and dirt to effect an entrance into the goaf. No gas was visible at the edge of the goaf, and probably what there was had been located in one of the "pot holes," which are numerous in the roof here. Hence the importance, not only here but wherever the presence of gas is suspected, of the rule which prohibits any maked light being taken into a goaf. The poor fellow in this instance paid the penalty of his disobedience with his life. The father was not allowed to work in the mine again, as a person who can be guilty of such folly not only risks his own life, but jeopardises the lives of all at work with him, and managers are quite justified if such an act be once brought home to anyone in taking care he has not a second opportunity.

Another accident specially referred to was at the Rockingham Colliery, near Burnsley. An assistant banksman, named Joseph Beaumont, fell down the shaft from surface. He mistook the side on which the cage was resting, and pushed an empty corve into the wrong side where there was no cage. The corve fell down the shaft, and being unable to recover himself he followed it. Owing to the unfinished state of matters about the pit self-acting gates had not yet been fixed, although they were in course of construction, and in the meanwhile a bar had been fixed across the mouth of the shaft at about 3 ft. from the ground. This, however, was insufficient to save the course this is his statement; but it is possible that had he been at the handle he might have stopped the engine so soon as it began to move. The deceased was a careful man and an experienced engine-wright, about 55 years of age, and he would seem to have depended od deal on the verbal instructions he himself gave the engineman before going to the scaffold.

The company commenced with only \$1786, 8s. 3d. capital in money, and therefore had to raise some money on debentures at a high rate of interest. When such additional money was expended, and a considerable amount of interest had accrued, the company had no alterative, in order to pay off such debentures and interest, and provide unds to continue its operations, but to get the 75,000 unissued ordinary shares cancelled and create and issue the existing 40,000 preference shares. By the issue of those shares the amount of the debentures and accrued interest (the holders of them taking payment in such preference shares) was all paid off, and a further comparatively small amount of working capital provided, and it has been by the partial expenditure of such capital that the affairs of the company have since been carried forward and the Kurilla Mine brought into its present very promising and satisfactory position. But, inasmuch as the dividend on the existing preference shares is a cumulative one, arrears have necessarily accrued, which will amount at the 30th of this month to the sum of about 14,600%.

Now, these arrears must all be paid off before the regular pay-THE COAL TRADE. - Messrs. G. J. Cockerell and Co. in their 44th

shadows commercial as well as other interests. If this country should unhappily be drawn into war, we believe the price of coals would seriously advance. Steamers war, we believe the price of coals would seriously advance. Steamers in carrying coal between the northern ports and London would n the Crimean war, be taken out of the trade, and freight charges

ECHOES FROM THE MINING MARKET.

Without any great accession of business the markets are generally

BCHOES FROM THE MINING MARKET.

Without any great accession of business the markets are generally firm, and the late advances in the price of Rookhope and North Laxey have been well maintained all the week. The leading dividend lead mines show symptoms of recovering from their late state of depression; there has been some activity in the foreign market, and a rather better enquity for collegy slares, while there seems to be an inpression and that the best of the state of depression; there has been some activity in the foreign market, and a rather better enquity for collegy slares, while there seems to be an inpression and the college condition from 15th to 15th, the opening price on Monday. Yan Consols have received by stages to 15th, and Girn from about 15th, 15th on the above, we have to note the market deeline that has taken place in both by stages to 15th, and Girn from about 15th, 15th on the above, we have to make the state of the sta

THE WEEK.

SATURDAY, JUNE 16—New Zealand Kapanga shares are again to the front. A few days ago they could be hardly sold at 2\(\alpha\), now sellers were asking 2\(\frac{1}{2}\), and in a few instances getting it. Parvs Mountain firm at 9s. Leadhills steady at 6\(\frac{1}{2}\). Glyn nominally \(\frac{1}{2}\) to 1\(\frac{1}{2}\), and Van Consols, 1\(\frac{1}{2}\) to 1\(\frac{1}{2}\). Richmond still scarce at 2\(\frac{1}{2}\). In the general markets business was rather languid, Berwicks were, however, stroug, and rose to 152\(\frac{1}{2}\). Central Illinois, 51 to 52. Direct Cable, 12\(\frac{1}{2}\) to 12\(\frac{1}{2}\); Newfoundland, \(\frac{1}{2}\) to \(\frac{1}{2}\); National Safe, 3\(\frac{1}{2}\) to 10. paid().

(10), paid).

Monday.—After a stendy rise all round, a forced sale of a quarter of a million of Consols made at 5s, below the ruling price caused a sudden downward leap, and every department closed considerably lower than on Saturday. There was a change for the worse of nearly 1 per cent. in Dover, A. Orders to self from Germany were received after hours, but there was not a sufficiently strong gathering outside to do much. Van Consols were offered at 1%. Parys Mountain was wanted at 9c. 6d., and Abgrdaunant at 12s. 6d. Eberhardt rose 5s., to 6%; Richmond fell 5s., to 6%.

4. Consols were again offered, and closed 1½ to 1½, with a dult conds receded to 64. [Parys Mountain was again a good conquiries were made for shares; very few, however, are being

the lowest ever touched, though it may now bound at 101. Australian last year. Rock Life was done at 8½. National Discount at 101. Australian Agricultural at 90½. Hudson's Bay at 10½. Pawson at 8½, and Royal Aquarium at 3.1 1511s.

WEBDESDAY.—The annual meeting of the Enhw Vale Company is expected to be held during the last week of this month. The shares were dealt in to-day at 9½. They are 32. shares, with 29. paid. Therefore telebred 15. Eley Brothers 28 (101, pid), Milner's Sate 9.5 18ths, and Pawson 8½. Peruvian Fives fell nearly 1 per cent., to 11½. Egyput in Preference closed at 8.5; and Russian, 1873, at 77. There was further sales of Van Consols, the price at the last not being better

1 per cent., to 11½. Egyptian Preference closed at 69: and Russian, 1473, at 177. There was further sales of Van Consols, the price at the last not being better than % to 1. Lust Chance were quoted ½ to 5%, and New Quebrada 1½ to 2. Parys Mounain still scarce, and called 9s. to 10s. North Laxey, 19s. to 21s. Rookhope, 19s. to 21s. A report from New Zealand Kapanga states that from 40 tons of quartz crushed there was a yield of 20 ozs. of gold. South Condurrow, The 7½ to 7½, and dull; Assheton, 1½ to 1½.

THUSBOAY.—The market opened with a very dull appearance, the rumour that our 'Government would require a supplementary vote for the Army and Navy having to-day attained greater dimensions, and found its way into one of the leading papers. Consols again declined, and a few sales brought down prices in Brighton, Caledonian, and British stocks. Egyptian Preference was a dull market. There was a slight improvement, however, before the close. Leadhills, 5% to 5%; Savali, 7s. to 9s.: Parys Mountain, 9s. to 10s.; Aberdaun unt, 11s. to 13s.; Bamptylde, ¾ to ½: Roman Gravels, 10 to 10½; Tankerville, 7½ to 7½.

FEIDAY (Opening).—The markets have a dull appearance. Caledonian is down ½ per cent, to 12½, 122¾, and Dover A½, to 119½, to 119½. There is some enuiry for North Laxey and Van, from both of which mines good reports have been eived. A circular issued by the Beistone Company states that, in order to work

on a larger scale, the directors have determined to issue 12,000 more sheres, entitled to a preferential dividend of 10 per cent. Capt. Richards, of Devon Consols, gives a favourable report. Parys Mountain, 9s. to 11s.; Rookhope, 19s. to 21s.; Roman Gravels, 10 to 10½; West Tankerville, ½ to 1½; Richmond, 6½ to 6½; New Quebrada 1½ to 2; Kapanga, 2½ to 3. Van Consols show no recovery, remaining ½ to 1. East Van firm, at 5 to 5½. I. X. L. are in request, and quoted 8s. to 10s. Exchequer, ½ to ½; Ban Pedro, ½ to ½; Don Pedro, ½ to ½; Gienroy, 1 to 1½; Gyn, ½ to 1½; Great West Van, ½ to ½; Pateley Bridge, 2½ — Theo 6 Clock Very little change has taken place. Caledonian slightly better, now 122½ to 123. Great Western, 100½ to 100½; North British, 92 to 92½; Birmingham, 140½. Russian are 76½ to 77; Egyptian (pref.), 50½ to 50½; Unified, 40½ to 40½.—Four o'Clock.—Consols have given way. Caledonian has a slight improvement, and is now lower than at the opening. New Quebrada has been dealt in at 2, and Frontino at 2½. Leadhills offered at 6ℓ. North Laxey, 20s. to 22s. 64s. Birchin-lane, June 22.

HULTAFALL LEAD AND BLENDE MINES, SWEDEN. SPECIAL REPORT.

The subjoined special report upon the Hultafall Lead and Blende Mines, in the Nerick district, Orebro, Sweden, has just been made for Mr. George Batters, of Austinfriars, by Capt. Richard Southey, West Chiverton:-

REPORT OF THE HULTAFALL LEAD AND BLENDE MINES, SITUATED IN THE DISTRICT OF NERICK, PROVINCE OF OREBRO, SWEDEN.

Mines, in the Nerick district, Orebro, Sweden, has just been mude for Mr. George Batters, of Austinfriars, by Capt. Richard Southey, of West Chiverton:—

REPORT OF THE HULLFALL LEAD AND REEDE MINES, SITUATED IN THE DISTRICT OF NERICK, PROVINCE OF OREBRO, SWEDEN.

Jame 18.——In framing my report of these mines, I will eall your attention to the great extent of ground there is on the course of the lodes. The one on which Max, the lode of the property of the course of the lode being north-east by outlawers. Sweral hundreds of fathoms in a north-east direction from Maxfield's shaft there is a cross lode of great promise, with about the same distance on its course as the one just alluded to, with several tons of rich blende already raised from the cuterop. The set is held on leases for or every to taken away from the catate; these terms I consider execution of rich blende already raised from the cuterop. The set is held on lease for or every to taken away from the catate; these terms I consider execution of the shaft is lode varies in size, and is from 6 to 8 ft. wide, with a regular and well defined footwall, but no true hanging wall has yet been seen. About 15 first west of this shaft, at at what is called the Perkins Mine, the lode is opened on at surface, the lead and at what is called the Perkins Mine, the lode is opened on at surface, the lead and at what is called the Perkins Mine, the lode is opened on at surface, the lead and at what is called the Perkins Mine, the lode is opened on at surface, the lead and at what is called the Archive and the wines of grante, and judging from the discarded state of the hauging the state of the part of the pa

THE BRITISH DYNAMITE COMPANY (LIMITED) v. KREBS

BEFORE MR. JUSTICE FRY.

This was a patent suit relating to explosive substances, of interest in its subject matter, from the extraordinary physical qualities that have been discovered appertaining to explosive substances, especially nitroglycerine, and also as illustrating the quicksands an inventor has to steer through in taking out and substantiating a patent. The plaintiffs, when the bill was first filed, were the British Dynamite Company, then the owners of patents taken out by Mr. Newton of inventions communicated to him from abroad by M. Nobel. That of inventions communicated to him from abroad by M. Nobel. Tompany had since assigned their business to a new company obsels Explosives Company—who were made coplaintiffs. This suit relates a tent taken out in 1887 for dynamite. The defendants are manufacturer fologone, of lithofractery, and their agents in England, who have sold that man in this country and also taken steps to set up a manufactory at Purfleet Sease. Nitroglycerine was discovered in the year 1847, which, as is well knows a very strong, but highly dangerous explosive. It was of no practical use, any because of the great danger both in storing and carrying the substance, which has because the nature he explosion was too rapid, and produced an effect not suitable for blasting; to see, or otherwise as a substitute for gunpowder, which has been called a burst fleet. In 1893 a patent was taken out of an invention by M. Notel for an overed gunpowder, by mixing nitroglycerine and analogous substances, such mattrates of ethyle and nethyle, with gunpowder, or with sulphur and can be in the suppose of the nitroglycerine or other substances supplying, in the latter of the nitroglycerine or other substances supplying, in the latter of the nitroglycerine or other substances supplying, in the latter of the nitroglycerine or other substances supplying, in the latter of the nitroglycerine or other substances supplying, in the latter of the nitroglycerine or other substances supplying, in the latter of the nitroglycerine or other substances supplying, in the latter of the nitroglycerine or other substances supplying, in the latter of the nitrogly of the alone. Some of the nitroglycerine or other substances supplying, in the latter case, the place of sulpetre in ordinary gunpowder. The object of this patent was to temper or regulate the explosive force of the fulninating substance. The patent, on which the plaintiffs relief, and which they complained was being infringed by the manufacture of lithofracteur, was taken out in 1887. The actual words of the specification are important in their legal bearing, and they well describe the peculiarities of this new compound. That instrument stated as follows: "This invention relates to the use of nitroglycerine in an altered condition, which renders it far more practical and safe for use. The sittered condition of the nitroglycerine is effected by causing it to be absorbed in porous un explosive substances, such as charcoal, silica, paper, or similar materials, whereby it is converted into a powder which I call dynamite, or Nobel's safety powder. By this absorption of the nitroglycerine in some porous substances, it acquires the property of being in a high degree insensible to shocks, and it can also be burnt over fire without exploding. The aforesaid asfety-powder or dynamite is exploded—first, when under very close and resisting confinement by means of a spark or any mode of ignition used for firing ordinary gunpowder; second, without or during confinement by means of a aspecial fulminating cap containing a strong charge of fulminate, which is adapted to the end of a fuse; third, by means of an additional charge of ordinary gunpowder; third, by means of an additional charge of ordinary gunpowder; second, without or during confinement by means of an absorbent with an alkaline substance. The inventor claimed the mode of manufacturing the safety powder, as also the mode of firing the same by special ignition.

For additional safety the porous substance was to be washed before use in an absorbent with an alkaline substance. The inventor claimed the mode of manufacturing the safety powder, as also the mode of firing the sam

glycerine without danger of exudation. The dynamite of the plaintift coals of 75 per cent, of nitroglycerine, and 25 per cent. of kieslegurit. The lithofracture of the defendants consists of 55 per cent. of nitroglycerine, 21. The lithofracture and the remaining 24 parts of other absorbents, chiefly charged, bran which and the remaining 24 parts of there are the coals and the remaining 24 parts of there are the coals and the remaining 24 parts of the patches, which are the plaintiffs' manufeaur, sulphur, mirrate of baryta, and other substances which have called smaller, plosives. The defendants admitted the usefulness of the plaintiffs' manufeaur, in respect—first, that it did not produce the same disagreeable efluxium on several chough they put in evidence to show that lithofracture was a preferable marine, in respect—first, that it did not produce the same disagreeable efluxium on several quarries and mines. They denied the novelty of the invention, in that they exist that the patent of 1863 was an anticipation of the one under the efficiency exists and patent of 1863 was an anticipation of the one under the winds and not sufficiently clear to have enabled an ordinary work with the patents of the summary of the mode of explosion of some substances produced by a shock and of the summary of the mode of explosion of some substances produced by a shock and of the summary of the mode of explosion of some substances produced by a shock and of the summary of the mode of explosion of some substances produced by a shock and of the summary of the mode of explosion of some substances produced by a shock and of the summary of the summary of the summary

EXPERIMENTS WITH TONITE IN LEEDS.—Several interesting experiments were made on Wednesday in a field at Farnley Wood, near Messrs. Clayton and Speight's coal pits, by Mr. T. Dineen, of the firm of Dinaen. Son, and Co., Leeds, with their new explosive called "Tonite." The experiments were undertaken at the request of a number of gentlemen connected with ironworks, iron mines, quarries, coal pits, &c., and among those present were Mr. Erza Woodhead, ehief manager of the Lowmoor Ironworks; Mr. Hezekiah Tempest, manager for the same company at Beeston; Mr. S. Robertshaw, chief manager at the Farnley Ironworks; Mr. Clayton, one of the proprietors of the ground where the experiments were made; Mr. Daydo Nickols, builder, Leeds; Mr. Wilkinson, Beckett-street Colliery; Mr. Henry Birkby, of Wike Brickworks; Mr. Briggs and Mr. Topham, Leeds, and others. The object was to show how the explosive c uild be used in clearing land of tree Istumps and boulder stones, as well as in quarries and ironworks in breaking up slag, old iron, &c., and to prove its perfect setty in handling, transit, storage, and use. The "Tonite," or "Patent Cotten Gunpowder," is of a very different nature from Amanic or guncotton, and Mr. Dineen claims for it that it will not explode except, when a copord of the provided except, when a copord country specially provided for it is inserted in a cartridge with littled tass attached. It then explosives with a lond report, but produces no small, smole, or poisonous funces. It contains no nitred leveler, but produces as states and a support of the state of the st

into fragments, thus showing the downward power of the explosive. Another proof of the safety of the tonice when no cap and fuse are attached was given by Mr. Dineen, who put two cartridges over a small bug of gunpowder on being fired the gunpowder exploded, but the culy effect upon the tonic was to ignite it. Cartridges were also placed under the stumps of trees, and these were shivered into fragments. Seven cartridges were then placed beneath a stone which weighed between 2 and 3 tons, and the result of the explosion was hed from the stone into a great many small pieces. Another large stone was fired from the top, with only a little clay over the cartridge, and the result was the same. A piece of an iron rail was then brought forward. It was 2 ft. by 4 in. by 2 in. and weighed 36 liss. A cartride having been placed heistle it and fired, the rail was broken into four large pieces, in addition to many smaller ones. At the close of the experiments, when many people had left the ground, Mr. Robertshaw and Mr. Tempest expressed a desire to have the tonite tried on a piece of rail made from the best Vorkshire iron manufactured at the Farnley Works. Accordingly a piece of rail was brought, which measured 6 ft. by 4 in. by 2 in. In the first shot three curridges were appied, and on being fired the rail was completely fractured. A single cartridge was then applied to one of the broken pieces, measuring 2 ft. 6 in. length, and the result was that the rail was completely satisfied with the experiments, and there appears to be little reason to doubt that tonic is one of the simplest, safest, and most powerful of explosives which have yet been brought before the notice of the public.

Belstone.—The directors have just issued the report they have received from Captain Richards, of Devon Great Consols, showing the position and prospects of their undertaking. He observes that up to this time the operations at Belstone have, as a whole, been too restricted, and that if more extensive workings as to drivages, &c., had been carried out, together with the systematic laying open of the ore ground, still more satisfactory results might have been gained. The sinking of the engine-shaft to the present depth o, 80 fms. is, of course, so far, a commendable piece of mine-like work, and good results have been obtained therefrom, the of ground discovered here in the western drivage being of considere able importance. The ore also being of such a description (rickled with the such as to warrant the prosecution of the sinking to a considerably greater depth; for, taking into account the unusual height of the mine above the sea level, the present depth may be regarded as only, comparatively speaking, very shallow. The 80 cross-called should also be carried completely through the lode, the indication in the present end being still most favourable. The directors point out that although the mine will probably pay, and pay well at the present depth, yet these workings can only be considered shallow as compared with other successful mines; therefore, any scheme for its development must provide for the further continued dependent of the shafts and exploration of the lodes at greater depth. The directors, therefore, in order to provide for paying off the existing debenture debt of 3000%, to erect new and more powerful pumping machinery; to provide for a more vigorous and extensive exploration and development of the mine, and to permit of the closing of directors, therefore, in order to provide for paying off the existing debenture debt of 3000L, to erect new and more powerful pumping machinery; to provide for a more vizorous and extensive exploration and development of the mine, and to permit of the closing of the capital account with this issue, propose to raise 12,000L in 12,000 preference shares of 1L each, thus increasing the capital to 40,000L. These new shares, it is proposed, shall be entitled to a preferential dividend of 10 per cent, as well as participating in any further profits after 10 per cent, has been paid on the whole capital. The directors have great confidence in the successful working of the mine—in fact, so very promising is the appearance of the lode at the 80, that large returns from that depth may be confidently relied upon, when properly laid open; but it is, nevertheless, absolutely necessary that the proposed expenditure should be at once incurred, and the works be carried out, so that this large and valuable property may at an early date—possibly in a few and valuable property may at an early date—possibly in a few months—be brought into a dividend paying position.

The Master of the Rolls has appointed Mr. Edward Ashmead, of 62, Cornbill, official liquidator of the Trust Association (Limited).

The Master of the Rolls has appointed Mr. Alfred A, Broad official liquidator of the Langha in Skating blink

1877.

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were kept up very well in the past month, and the stopes are producing the usual quantity of ore at present. The works at surface are going on very regularly, and the machinery is in good working condition. We estimate the raisings for June The Bell Abbey & Falcon Cliff Mines

ISLE OF MAN.

CAPITAL £50,000, IN 10,000 SHARES OF £5 EACH.

(First Issue, £30,000.)

peposit on application, £1 per share. On allotment, £2 per share. The remainder to be called up as required.

Deposit on application, at per state. On anotherit, 22 per state. The remainder to be called up as required.

DIRECTORS.

RALPH FAWSETT AINSWORTH, Esq., M.D., F.L.S., &c., Cliff Point, Broughton, Manchester.—CHAIRMAN.

EDMUND BUCKLEY, Esq., Wool Broker, Dale Street, Liverpool,

FRANCIS JAMES EATON, Esq., General Broker, Queen's Buildings, Dale Street, Liverpool; and Hesketh Park, Southport.

(Fagh of when her exhabited for 200 Street).

(Each of whom has subscribed for 200 Shares.)

With power to add to their number, BANKERS. LIVERPOOL.—The BANK OF LIVERPOOL, Water Street, Liverpool; and GLYN, MILLS, and CO., London. ISLE OF MAN—The ISLE OF MAN BANKING CO. (Limited).

SOLICITORS Messrs, LACES, BIRD, NEWTON, and RICHARDSON, 1, Union Court, Castle Street, Liverpool.

AUDITORS.

Messrs, J. S. and R. BLEASE, Public Auditors, Liverpool.

SECRETARY-MR. WILLIAM C. BEW. REGISTERED OFFICES.

COLONIAL BUILDINGS, 36, DALE STREET, LIVERPOOL.

PROSP ECTUS.

In effering to the public such of the First Issue of shares in this company as remiss unablotted, the directors are fully justified in believing the investment to be used to the first Issue of shares in this company as remiss unablotted, the directors are fully justified in believing the investment to be used to the property of placing shares, and have perferred, with moder under the purpose of placing shares, and have perferred, with moder and the property of the purpose of placing shares, and have perferred, with moder and the property of the property of the property of the purpose of placing shares, and have perferred, with moder where the purpose of placing shares, and have perferred, with moder and the property of the property of the proposed placing to the public till a revival in companies the proposed of the prop

ad on as being the result of well trained and mature judgment, based all daily observation.

It daily observation.

It daily observation will take the trouble to examine the property, no loubteau be felt that with a liberal and judisions expenditure of capital age the features which have now been established, it must specify prove a most valuable and hurrative mine, or rather series of mines, see care has been taken in laying out the workings and buildings, and the best class of engines, machinery, and other appliances, under the lence of Mr. A. Francis, of Rhos-du, Wrexham, and in all these respects any challenge the severest criticism.

erty is now held under Crown lease at unusually low rents and rayalties, special advantage of water power, which will obviate the necessity for litional permanent steam power to carry out proposed new workings, sontains about 1120 acres, hase money to be paid by the company is £9000, the charlest of the directors will be fixed by the shareholders in general meration of the directors will be fixed by the shareholders in general

event of no allotment being made to an applicant, his deposit will be re

In the event of no anothers, seeing mass as a superstance of reliable model in full.

The deposit on application for shares may be forfeited, and the allotment cancelled, by the directors in all cases where the further payment on allotment is not day made, in accordance with the terms of the allotment letter.

Copies of the Articles of Association, the surveyors' reports, the provisional agreement, &c., can be inspected at the Solicitor's and the Secretary's offices.

The only contract entered into is one bearing date 1st March, 1876, between Rajhs Fawsett Ainsworth, M.D., Edward Wrangham Bird, Edmund Buckley, and Francis James Eston, as vendors, and William Charles Bew, as purchaser, on belaif of the new company.

s James Eaton, as vendors, and william Charles Bew, as pucchaser, on he new company. uses and Firms of Application can be obtained from the Bankers and und at the offices of the company. cons for shares will be received by the company's Bankers,

REPORTS.

REPORTS.

To the Directors of the Bell Abbey and Falcon Cliff Mines (Limited).

**Rely Man, April 20th, 1817.—General We inspected your mine on the 18th instant, and after careful consideration submit to you our report thereon, more especially referring to what we advise as to the future workings. Your shaft is such 72 fms. below addt, and bevels driven for considerable distances north and south, at intervals of 12 fms.

**The lode is of great width, and the promising indications it showed almost at surface, and the frequent bunches of ore (Lad, copper, and blende) met with throughout fully warrant, in our judgment, all the trials which have been made. (The copper already sold by you, as well as that we saw in the mine and at surface, is certain y of superior quality. The lead and blende we take as being about the average of M inx ores.)

The choice is of great width, and the promising indications it showed almost auriane, and the frequent burshes of ore (i.e.d), especially and their to) must with a strained and at surface. The expect all the machinery is in good order and working well. Ore fiberaper already sold by you, as well as that we saw in the mine and at surface, it is a superior quality. The lead and blonde we take as being about the some firm and the surface of the surface and blonders are all the surface and the surface and blonders. The control of the surface are all the machinery is in good order and working well. Ore fiberaper already sold by you, as well as that we saw in the mine and at surface, it is a surface, and and blonders are all the surface and blonders of the surface and blonders and blonders of the surface and blonders and bl

penditure required to develope what you have a right to regard as a thoroughly sound and promising mine.

WALTER EDDY, Mineral Surveyor.

JOHN KITTO, Manager of the Grogwinion, Wye Valley, Red Rock.

South Cwmystwith, 8t. Harmon, West Goghan, and other Mines.

Copy of Letter from Capt. Willliam Kitto, Manager of Foxdale Mines.

Ke of Mon, May 5th, 1877.—Dears Mr. Bew: I have read Mr. Eddy's and my it contains. If it errs, it is on the side of caution; but there is one point upon which I think none of you lay sufficient stress—I mean the driving of your adit northwards. I have often said to you that were I in a position I would risk my commoney here, trusting solely to what I could discover as payment or remuneration for my outhay, as to my mine colessed to the sufficient which, you have the advantage of the level as the natural drain. When you are personal, labelieve you may safely rely on the results.

WM. KITIO.

Rell Albey and Fidem Cilf Mine, Culley, Isle of Man, May 5th, 1877.—Dear Sire.

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Solved and Fidem Cilf Mine, Culley, Isle of Man, Copy of Letter from Capt. WILLIAN KITTO, Manager of Foxdale Mines.

**Ric of Mon, May 5th, 1877.—Dear Mr. Bew: I have read Mr. Eddy's and my

Brother's report, and having been frequently through your mine, I can endorse all

it centains. If it errs, it is on the side of caution; but there is one point upon

which I think none of you lay sufficient stress—I mean the driving of your adit

which I have often said to you that were I in a position I would risk my

own money here, trusting solely to what I could discover as payment or remune
ration for my outlay, as to my mind courses of ore are sure to be found making up

to the surface, as they have done so close to you in the adjoining mine; besides

which, you have the advantage of the level as the natural drain. When you are

in a position to employ more labour, allow me to urge that this be one of your first

operations. I believe you may safely rely on the results.

WM. KITTO.

Bell Albey and Falcan Cliff Mine, Colby, Isle of Man, May 5th, 1877.—Dear Sir: Capts. Eddy and Kitto having lately inspected your mine, I will confine my remarks to our present operations and a few suggestions as to the future.

6) North.—The part of the lode we are carrying consists chiefly of spar, with small cavaties in it, some of which contains cubes of lead and mundic. The country rock to the east is less broken than in some parts of the level outwards. This point is of much interest, because it is immediately under the copper discovered in the \$\frac{1}{2}\$ fin, level, from which we have had such good ore in bulk; but as the ore usually dips north, the end is not sufficient advanced to catch it. Personally, I have strong hopes of this.

were kept up very well in the past month, and the stopes are producing the usual quantity of ore at present. The works at surface are going on very regularly, and the machinery is in good working condition. We estimate the raisings for June at 450 tons.

LINARES.—June 13: Pozo Ancho: In the 120, east of 8t. Tomas engine-shaft, the lode is large and strong, but does not contain any ore. The lode in the 100, east of Warne's shaft, is disordered and poor. In the same level west the lode is open, and yields ½ ton of ore per fathom. The 120 fm. level cross cut, south of Peill's shaft, is desiring ground worth 1 ton per fathom. The lode in the 90, west of Peill's shaft, is compact and regular, and produces 2 tons of ore per fathom. The 65 being driven in the same direction continues unproductive. The lode in the 105, east of Peill's shaft, is improving, yielding 1½ ton of ore per fathom. In the 90, east of San Francisco shaft, the lode is regular and well defined, and yields 2 tons per fathom. The lode in the 75, east of this shaft, is small and poor, and the ground hard for driving. The 65, east of San Francisco shaft, is without anything to value. In Santo Tomas engine-shaft the pitman is fixing a plunger lift at the 120. No. 217 winze is hole to the 65. In No. 218 winze below the 85 the lode is small and unproductive progress is being made in driving the 100 crosscut, south of Taylor's engine shaft, considering the hardness of the granite. The 90, west of Taylor's shaft, is poor. The lode in the 80, driving in the same direction, is open and easy, and yields good stones of ore. In the 90, east of Madis's shaft, the lode is regular, but of no value at present. In the 80, east of This shaft, so pen and easy, and yields good stones of ore. In the 90, east of this shaft, the lode is regular, but of no value at present. In the 80, east of The 90, the productive. Dona's winze below the 55 is situated west of San Carlos shaft, the lode is disordered by a cross course. The same level east is easy for driving, but does not

[For remainder of Foreign Mines, see to-day's Supplement.]

LEAD ORES. e. Mines. Tons. Pri 13-Rusken 40 4 15-Cwm Elan 15 16-Foxdale 110 -Rookhope. 40 21-Roman Gravels 150 - ditto 50 - Kingston Consols 6 - ditto 4 Purchasers. Nevill, Druce, and Co. Treffry's Estate. Cookson and Co. Walker, Parker, and Co. Adam Eyton. Sheldon, Bush, & Co. ditto BLENDE. Date. Mines Tons. Price per ton. Purchasers. June 16—Nantiago 25 £ 3 5 3 Kenrick and Sons. 21—Roman Gravals 60 3 8 0 Vivian and Sons. — Kingston Consols 5 4 2 6 Dillwyn and Co. — ditto 5 1 19 0 Vivian and Sons. BLACK TIN.

s. Mines. Tons c. q. lb. Price per ton. Amount. Purchasers. 14—West Godolphin 8 11 0 11 ... £40 7 6 ... £345 8 0—Bolitto. 18— ditto ... 7 0 2 14 ... 40 10 0 ... 302 10 10—Michell.

	Extract from Report, 12th May, 1877.	Sampled June 6, and sold at Swansea, June 19.
5	I am glad to tell you the stope in the roof of this level (the 36) is gradually improving going up. I never saw it looking so well as it is to-day, and the men	Mines. Tons, Produce, Price. Mines. Tons. Produce. Price. Moonta Ore. 77 241/2 £16 13 6 Algerian Pre. 2 44 £29 12 0
	say they never saw anything in the mine so good.	ditto 77 2414 16 12 6 Knockmahon136 854 5 18 6
	Dressing: We are getting on with this—crushing the copper to-day, and have	ditto 76 241/2 16 12 6 ditto 120 73/2 5 5 6
-	a good pile of lead broken up for crushing.	ditto 76 24½ 16 12 6 Cape Ore 83 28¾ 19 15 6
		ditto 96 28¼ 19 8 6 ditto 83 28¼ 19 16 0
	Extract from Report, 21st May, 1877.	ditto 58 2634 18 2 6 ditto 82 2834 20 2 0
	24 North: I put two men here to day, and find there is some very nice lead in	ditto 57 :61/2 18 4 0 Aljustrel Ore 74 41/2 2 15 6
1	the roof. No doubt is a continuation of that we have in the 35 stope.	ditto 49 261/2 18 5 0 ditto 74 41/2 2 15 0
		ditto 48 26 4 18 7 6 ditto 74 4 5 2 14 6
		New Que-1 87 1234 8 10 0 ditto Pre. 7 5134 35 18 0
	BODRION MINES	brada \$ 87 1234 8 1 0 Copper Ore 80 934 6 5 6
	FOREIGN MINES.	ditto 87 121/2 8 7 6 ditto 80 91/4 6 4 6
	RICHMOND CONSOLIDATED R. Rickard, May 28: Since my last there	ditto 87 12½ 8 6 6 Cronebane 117 25% 1 5 0
•	has not much work been done in the rise in back of the 500 west, on account of	Berehaven 98 8½ 5 15 0 Ballycummisk31 8 5 3 0
	want of air. We are now up over 70 ft., with ore still in the back. We have been	ditto 81 101/2 6 19 6 Cosheen 9 111/2 8 1 0
	cutting out on a level of 500 drift, and putting in timber; where we have opened	ditto 81 10½ 6 19 0 Australian 19 17½ 11 15 0
n	on the ore it is looking very well. The winze below the 500 is down 50 feet, with	ditto 17 834 5 13 0 ditto 3 1134 8 5 0
	ore in the bottom. The 600 drift is progressing favourably; we shall soon have	Algerian Ore 95 734 5 0 0 ditto 6 1734 11 12 0
'n	this drift under the winze, when we shall rise to make communication. We have	ditto 88 81/8 5 5 0 Copper Matt. 8 191/4 10 0 0
	started a drift from the 400 main drift, in a westerly direction, to intersect the rise	ditto 71 714 4 19 0 Copper Reg. 5 3114 21 8 0
đ	in back os the 5.0 drift; we have about 100 ft. to drive, and the ground is very	ditto 14 17½ 11 10 0
	favourable. The repairs to furnaces and machinery are going on well. I expect	TOTAL PRODUCE.
	to draw it to a close by the end of the week.	Moonta
	BRITTANY MINERALS. J. Edwards, June 15: We put the new pumping-	New Quebrada 348 2,892 15 0 Cronebane 117 146 5 0
	engine to work last Saturday evening, and on Tuesday night it forked the water	Berehaven 277 1,787 9 6 Ballycummisk 31 159 13 0
	in the bottom, and I am pleased to say the engine and all its connections are of	Algerian 270 1,508 13 0 Cosheen 9 72 9 0
-	the best quality, and are working well. We shall complete the erection of the	Knockmahon 256 1,438 16 0 Australian Ore 28 317 12 0
69	engine house during the forthcoming week. There is no change worthy of re-	Cape Ore 247 4,913 2 6 Copper Matt 8 80 0 0
-	mark in the lode in the sump winze below the 70 during the past week, or in the	Aljustrel 229 861 16 0 Copper Regulus 5 107 0 0
3	lode in the 70 end south from the sump. Ground sunk during the week 13 in.;	COMPANIES BY WHOM THE ORES WERE PURCHASED.
	lode worth 60%, per fm. We have driven the 70 end south 1 ft 8 in.; lode worth	Names. Tons. Amount.
t	from 1/1, to 201, per fin. for silver-lead ore. At the Bonexieres we have sunk the	P. Grenfell and Sons
1	engine shaft 3 ft. during the past week, making a total depth sunk below the 30 11 fms, 2 ft. The lode still maintains its size (6 ft. wide), and carrying good strings	Nevill, Druce, and Co 57 1,192 10 0
	of silver-lead ore. All the machinery is in good order and working well. Ore	Vivian and Sons
	raised 3 tons.	Williams, Foster, and Co 10271/2 9,648 15 3
e	ALAMILLOS.—June 13: The lode in the 50, west of San Felipe's shaft, is small	Mason and Elkington 60 685 5 6
	and annual duction. The 40 west of this shuft produces strong of one. The 20 in	

Nevill, Druce, and Co.
Vivian and Sons
Williams, Foster, and Co.
Mason and Elkington
Charles Lambert and Co.
Landore Copper Company

	Bampled Jur					R ORES. e Royal Hotel, Truro, June 21.
Mines		ons.		Pric		Mines. Tons. Price
	at Consols				0	Marke Valley 71 £4 1
ditto	***************************************			16	6	ditto 66 2 12
ditto	***************************************	91	2		0	ditto 33 7 5
ditto	************		2		6	ditto 32 2 10
ditto	***********	79	2		6	Glasgow Caradon 77 4 10
ditto		78	2		0	ditto 63 4 2
ditto	************	73	6	16	6	ditto 60 5 3
ditto	*************	71	··· 0		0	ditto 59 2 11
ditto	************			. 19	0	Gawton 59 1 14
ditto	************				0	ditto 56 2 10
ditto	************	64		16	6	ditto 49 2 11
ditto		45	2		6	ditto 29 1 10
South Care	don	94		16	0	Hingston Down 77 1 14
ditto	************	86	4	15	6	ditto 51 4 16
ditto	************				0	ditto 24 3 3
ditto	**********				0	Phœnix
ditto	************	5 e	11	2	6	ditto 40 8 6
ditto	***********	52	10	16	6	East Caradon 57 4 9
ditto	***********			10		ditto 43 5 12
Marke Va	lley					Wheal Courtenay 54 4 3
ditto		81			0	ditto 6 11 5
			TO	TAI	P	RODUCE.
Devon Gre	eat Con. 906		£3263	18	0	
South Car	adon 470		3058	3 2	0	
Marke Va	lley 380		1353	5 6	6	
Glasgow (Caradon, 250		104:	3 4	- 6	Wheal Courtenay . 60 293 2
Gawton	192	******	409	12	0	
					_	Average produce

Quantity of ore	atity of fine copper 176 tons 4 cwts
AST SALE -Average standard £ 99	8 0 Average produce 7
Standard of corresponding sale last mon	th, £ 99 15 0—Produce, 71/4
COMPANIES BY WHOM THE ORI	ES WERE PURCHASED.
Names.	Tons. Amount.
Vivian and Sons	5651/6 £2765 12 7
Grenfell and Sons	581 1/2 2736 12 6
Williams, Foster, and Co	4772/3 1628 15 8
Mason and Elkington	2213 556 12 8
Sweetland, Tuttle, and Co	2771/2 945 16 9
Watel	2650 £10,960 6 0

Crofty 177-Wheal Con

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the Mining Journal, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

Mine,

The great extension of mining business, the difficulty so often complained of
by country shareholders in getting accurate and disinterested information as to
the state of Cornish and Foreign Mines, and of the financial and real position of
mining companies generally, have induced Messrs. Wators Beothers to make
their Circular now published in the Mining Journal more extensively known, and
to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of
Mining Shares up to Four o'clock.

That they issue daily to clients and others who apply to pied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deat also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to ofer, thus publicly, their best services and advice to all connected with mines and mining.

with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

WATSON BROTHERS, MINEOWNERS, STOCK AND SHARE DEALERS, &c., 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

THE MINING DISTRICT OF LLANRWST-(Continued).

BRYNEISTTEDFOD as returning lead from one of the D'Eresby

Mountain lodes.
PENCRAIG is yielding very pretty ore. It has been worked above

PENCRAIG is yielding very pretty ore. It has been worked above the adit for more than 20 years. A shaft has been sunk 10 fms, below the adit, and we were told there was a tich lode in it. The present very limited workings yield 3 to 4 tons a month, but the mine, we were told, had changed hands, and is to be more vigorously workel.

VALE OF CONWAY has lately been commenced close to D'Elesby Mountain. There are two lodes, one east and west, the other north and south, and several tons of lead raised from each. On the north and south lode there is a course of lead worth 2 tons per fathom, some of it very rich. This, we understood, was discovered by the scratching of a rabbit, and is called the Rabbit Lode. Dressing lead has commenced, and wheel pit for crusher, &c, made. The mine is in 6000 shares of 2l, each, 15s, per share paid.

We only saw the Coed Mawr Pool and White Cliff Mines at a distance, but shall be glad to hear from the agents what they are doing. The White Cliff immediately adjoins D'Eresby Mountain, between it and the Llanrwst.

between it and the Llanrwst.

between it and the Llanrwst.

PANDORA, formerly called Willoughby, has two lodes (Goddard's and the new lode), and the two companies have sold from the 24 fm. level and upwards 605 tons of lead ore for 37134, and 694 tons of blende for 16264, together 10,3394. The shaft is down to the 33 fm. level, and fresh drivages begun on the new lode, and it is expected Goddard's lode will be intersected in about two months. The cross-cut towards this lode will it is expected that down the water. 33 fm. level, and fresh drivages begun on the new lode, and it is expected Goddard's lode will be intersected in about two months. The cross-cut towards this lode will, it is expected, let down the water and enable a winze to be sunk on a rich course of ore. On the 19th 40 tons of blende were sampled, and the next sale of lead will be 25 or 35 tons. In the last five months working of the present company the costs, including dues, have been 1531/. 4s. 1d., and the returns of lead and blende for the same period have realised 1418/. 154., so that a small increase in the latter would give a profit, which is expected soon. Some time ago the mine was examined by Mr. Walter Eddy, who expressed his surprise to find "so much ore in sight," and added, "I consider from what cu be seen that the mine is beyond a speculation, and if properly opened out and worked, that it cannot fail, in my opinion, to become a dividend-paying mine." The present company is in 12,000 shares of 2l. each.

NOTE ON D'ERESBY MOUNTAIN.—In our remarks last week we stated that an adit level, deeper than any yet explored by the present company would be cleared up and made the transway for the cress from the different levels above to the dressing-floors below; and when on the mine we instructed the agents to clear up and examine it at once. This morning (Thursday) we have received reports from the agents (Capts, Roberts and Bennett), who have both been in the level, and find in one of the ends a lode 2 ft. wide, and worth \(\frac{1}{2}\) time is a lode of fathom. Another end in this deep adit," and he will have to died them before deciding which they really are, in the will have to died them before deciding which they really are, in the level, and find in the before deciding which they really are.

4ft. wide, with a rio of lead ore each side. "There seems," Capt. Roberts says, "to be a conglomeration of Leles in this deep adit," and he will have to diel them before deciding which they really are, in connection with those above. The discovery in this deep part of the mountain, so much below the leve's described last week, is of great

CLEMENTINA.—The holing of the rise and the winze referred to has been completed, and good stoping ground laid open.

SATURDAY, JUNE 18.—Market very quiet. Roman Gravels a. equoted 15 to 1056 ookhops, 20s. to 22s. ed.; North Laxey, 19s. to 21s.; Glenroy, 20s. to 25s.; Lead ills, 6 to 545; Parys Mountain, 8s. to 10s.; Van, 3355 to 355; Grav Laxey, 20 to 21 MONDAY, JUNE 18.—There is little change to note in quotations to day, the little ag in being quiet. Vans are 10s higher, at 34 to 26, and South Condurrow, at 75 to 85. Parys Mountain firm at 8s. to 10s.; North Laxey 19s. to 21s. ookhops, 20s. to 22s 61.; West Chiverton, 15 to 17; Glenroy, 20s. to 28s.; Eas

FRIDAY, JUNE 22.—Market for tin shares flat; lead shares flem, and in demand. Van, 34 to 36; Rookhope (Lead), 20s. to 22s. 64; Roman Gravels, 10 to 1036; North Lavey, 20s. to 22s. 6d.; West Chiverton, 15 to 17; Great Lavey, 20 to 21; Glenroy, 20s. to 25s.; Leadhills, 5% to 5%; Tankerville, 7% to 7%; Combragatin, 78, 6d. to 12s. 6d.; Carn Brea, 32 to 31; Delcath, 29 to 31; Devon Consols, 4 to 4%; Tincroft, 13 to 15; Parys Mountain, 8s. to 10s.

STOCK EXCHANGE. - An interesting and ably written pumphlet STOCK EXCHANGE.—An interesting and ably written pumphlet gives much information on "The Stock Exchange; its Use and Abuse and the Royal Commission now sitting thereon" (London: George Taylor, Ave Maria-lane), which should be carefully read and considered by every investor and speculator. There is a brief sketch of the history of the Stock Exchange, an explanation of the mode of admission and expulsion, and chapters on the Stock Exchange behind the seenes, brokers and jobbers, decoy ducks, stockbrokers who advertise, the turn of the market, "bulls and bears," brokers' rents, and so on; the conclusion drawn being that it is from outside dealers rather than from members of the Stock Exchange that the public principally suffer.

Mr. Alderman Cotton, M.P., has joined the London board of the

Mr. Alderman Cotton, M.P., has joined the London board of the verpeol and kendon and Globe Insurance Company.

Mining Correspondence.

BRITISH MINES.

BRITISH MINES.

ABERDAUNANT.—S. Toy, June 20: The new shaft is sunk 3 fm. 4 ft. below the deep adit level. In the east part of the sett (Crowlum) in the cross cut driving towards the new lode the ground is harder than it has been for some time past. There is no other change to notice.

ASSHEDN.—John Craze, Joel Manley, June 20: There is no change to note in the 50, east of Mawr, on the north and south lode; we have about 2 fms. more to drive to intersect the south part of the east and west lode west of the north and south lode. The 10-2 east of Mawr, driving south on the north and south lode, has very materially improved since our last; the ore-bearing part of the lode is now 1/5 ft. wide, and worth fully 20! per fathom for lead ore; we havefrom 4 to 5 fms. more to drive to get under the Red sink from adit, wherefrom a great quantity of mineral is reported to have been raised by former workers, judging from which we calculate that we are now entering into a good run of productive ground. All the workings are yielding a fair quantity of mineral. No other change. We have shipped the parcel of blende ore—35 tons—sold to Messrs. Kenrick and Son, and we purpose sampling a parcel of lead next week.

BAMPFYLDE—J. Juleff, H. T. Haley, June 19: The different points in operation continue to look very well, and improving in appearance. In the 112 end, west of No. 4 shaft, the lode is worth 15/, per fathom, and it is peed. The 30, west of No. 4 shaft, is worth 12/, per fathom. No. 2 stope, in the back of the 113, west of No. 4 shaft, is worth 12/, per fathom. No. 3 stope, in the back of the 113, west of No. 4 shaft, is worth 10/, per fathom. No. 3 stope, in the back of the 113, west of No. 4 shaft, is worth 10/, per fathom. No. 3 stope, in the back of the 113, west of No. 4 shaft, is worth 10/, per fathom. No. 3 stope, in the back of the 113, west of No. 4 shaft, is worth 10/, per fathom. No. 3 stope, in the back of the 113, west of No. 4 shaft, is worth 10/, per fathom. No. 3 stope, in the back of the 113, west of No. 4 s

our of men to get to the adit level with all possible speed, in order to open on the earl seen there.

CARGOLL—J. Jennings, June 20: The 34 cross-cut south is driven 9 fathoms, in which we have passed through four branches of a very promising character. No. 4 branch has just been cut through, and produced splendid stones of silver-sad ore. The cross-cut end is now streaming with water, thus showing that we are nearing the south lode. The 24, east and west of shaft, are both promising suds, but are as yet of little value. The stope in back of the 24, east of shaft, continues to look well, and is worth 16°, per fathom. The adit level west, on the main lode, has been disordered by the influence of a small cross course for a short little, but is now assuming its former bearing, and is again producing some tones of lead ore. All other points are going on satisfactorily. We shall sample this week about 23 tons of silver-lead ore. We have not been able to work in the last for the last week in consequence of the water. The surface water has fallen off so much that we are obliged to work from the 25, which I hope to have accomplished by to-morrow evening, when we shall at once begin each end of the rise, where the look is worth 1 ton of lead or the last work in the post of the water was a position to when the dead work is the standard of the post of the study of the last water and position to lead to the last water and position to the last down the lead bearing part of the lost, and put the poor stuff on the stulls, which will be a great saving in drawing and dressing.

ask down the lead bearing part of the bole, and put the poor stuff on the stulls, uch will be a great saving in drawing and dressing.

COMBMARTIN.—C. H. Maunier, June 21: The lode at the 27 continues to all ½ too of silver-lead ore per fathom, with every in-deation at p esent for a triber improvement. The stope in this level is worth 5 cwts of silver lead ore fathom. At the 28 we are cross-cutting south a few feet of the former one, as bave reason to believe there is more lode standing in that direction. Harris's aft is cased and divided down from surface to the 28, and we commenced draw-trib the white or Meatry, which appropriate the lead of the leads of the stable.

is have reason to believe there is more rose standing in the second and divided down from surface to the 28, and we commenced drawing with the whim on Mon-lay, which answers admirably.

CWM DWYFOR.—J. Jewell, June 21: In the 20 driving west of Stewart's haft I am glad to say we are clear of the clay-slate rock in the roof. I think gainst next report day the level will be entirely clear of all slate, and soon after hope to be able to report cutting into a productive lode of lead. In the counter canch, the men are still desuing the lode. Probably the lode will be taken down gainst next report day; a little better progress is now being made. On Saturday ext I Intent to remove two of the 20 west end men to this winze, and as soon as he level is driven under the winze I shall put the end men to rise against the cluze to effect a speedy communication, and enable me to start some stopes. I ope short y to resume driving the 19, on No. 3 south lode, west of the south cross-

ope shortly to resume driving the 19, on No. 3 south lode, west of the south cross use. I selieve a great body of mineral will be found there.

CWM ELAN (NEW).—W. Goldsworthy, June 18: The engine-shaft is being unk with all possible speed, and we have about 6 ft. more to shik to complete the lepith for one mext tevels; the lode for length of shaft (10 ft.) is worth 20 cwes, of and and 20 cwts, of blends cress per futhom. The lode in the 31 west is yielding ome fine stones of lead one, but the quantity is insufficient to value. The indications in the forebreast are very favourable, and we may expect an early improvement here. All stopes in operation are producing the quantity of ore as last reserted. The purcet of lead is awaiting instructions for shapping. We have 20 tons of blends or element in the bin.

ment here. All super in order is awaiting instructions for shipping. We have 20 tons of blende one cleaned in the bin. Of blende one cleaned in the bin. CWMYSTWITH.—June 29: We have cut Michell's lode in the 12 fm. level, and driven east on the same I fm. 4 fc., and still find it poor. Consequently we suscended the driving, and have placed two of the men to stope in the back of Michell's level, on Michell's lode; thus we shall prove the dip of the ore. We have also placed two of the men to drive the 12 fm. level east on the new lode, and have 4 fms. to delve before we expect to get into over ground. The winze under Michell's level has been hoted to Gill's upper level; this part of the mine is now well ventilated, and we have put two men to strip out the part of the lode now standing in the sides of Gill's upper level, and hope to get good orey stuff from it, as we had nice ore at times when drawing. We have repaired the railroad and level at Pughe's shaft, and commenced at the old stulls, but have not found anything of value yet. Our expenters and smiths are still busily engaged:

ly s. lips, June 20: The 45, driving east of Wilson's shaft, con-

DUBBY SYKE—W. Tallentire, June 14: Dubby Syke Level: The voin we are diving on east is still improving, it is 4 ft. wile, of very kindly rider, and brytes, and producing very good samples of lead ore; it is softer, and easier to drive—Shooting Box Level: The vein here is not much altered, it is composed of soft red mineral and rider; we make good progress with driving. We have covered about 43 yards more of the new road this week.

EAST CRAVEN MOOR.—Divid Williams, June 21: The new shaft from the surface to the 42, upon Hardgate end vein, is down 15 ins. The lode here is of great size, varying from 6 to 10 ft. in width, composed chiefly of spar, barytes, and patches of ore, and is being sunk as quick as possible, to enable us to profitably work the ore ground in the roof and soles of the 42. We have cleared and repaired the 18 adit level 40 fms. west of engine-shaft, and hope to be able to resume driving upon Hardgate end vein in the course of a week, and cross-cut south from the end to intersect Woodhouse lode, which has yielded some hundreds of tons of lead ore from the shallow workings, and no doubt will be found very rich at this depth. We have raised about 3 tons of lead ore from the new lode in the cross-cut south from the 42, and it is again set as a metal pitch at 56s. per bing, or 140s. per ton, including raising and dressdag.

EAST VAN.—W. Williams, June 20: Tempest shaft still looks favourable. The stope over cross-cut A is improving for lead. No other change worthy of note. EAST WHEAL LOVELL—R. Quentrall, Jane 20: Fatwork: We are driving the 190 west by six men, at 14c, per fathour, owing to the westerly dip of the tin ground it has gone below the end, and in the bottom of the level there are six men stoping at 6c, per fm. Lode worth 26c, and of a very promising appearance. At 16c, per fathour, and eavery promising appearance. At 16c, per fathour, on what the shaft by six men, at 16c, per fathour is wing to the westerly dip of the tin ground it has gone below the end, and in the bottom of the level

on; the lode is large, and letting out a quantity of water. We see to drive the 71 west, on Flap Jack lode, by four men, at see to drive the 71 west, on Flap Jack lode, some time next week. In of the 60, west of Miller's shaft, by two men, worth 154, per fathor 13 stopes in the back of the 60, west of Miller's shaft, by 15 men, average 204, per fathom. Nos. 1, 2, 3, and 4 stopes in the back of Miller's shaft, worked by 22 men, worth each 184, per fathom, stopes in the back of the 60, east of Miller's shaft, worked by 15 mon an average, 244 per fathom.

1, 2, and 3 stopes, in the back of the 60.

KINGSTON CONSOLS.—J. Chynoweth, June 21: Fair progressions of the side, producing driving the 40 fm. level west of engine shaft. The lode is 61th wide, producing occasionally expited stones of lead and blende, and very promising for speedy improvement. At the 30, driving west, the lode is very much disordered at the present time, and unproductive. In the No. 1 winze, sinking below—the 30, the lote is large, producing good stones of lead and blende. The four different some working in the back of the 15 will average 12 cwts. of blende and 4 to 5 csts. of lead per fathom. Driving and stoping on north and south lote will yield cwts. of lead per fathom. In the No. 4 winze, sinking labor mentioned level, the lode is worth 2 tons of blende and 6 cwts. of lead per fathom the length of the winze offs. long). The rise and stope in back of the 18 are worth 10 cwts. of blende and 3 owts. of lead per fathom. In mpleased to say, for the good quality of our cargo of coals, one third of quantity has been saved. All the machinery is giving good satisfaction.

LADY WELL.—Arthur Waters, June 20: The 32, south of engine shaft, is gradually improving, the lode yielding stones of solid ore. The 16 fm. level south now fairly into the soft ground, and I have to day put the men to rise to the all level with a wisw of ventilating the south end of the mine. The pitch in the adil, 18 fms. behind the end, is now 15 fms. above the level, the lode varying in value from 1 to 4 tons per fathom; it is a very difficult thing to carry light into the workings here this hot weather, and we shall dial the ground to-mercow, and these fix on a site for sinking an air shaft on the said pitch to get rid of the difficulty. I believe that with good ventilation we could raise 30 to 40 rons a month from this pitch alone. The new south shaft progresses fairly, the lode yielding good iones of end ore.

of lead ore.

LLANIDLOES.—J. Kitto, June 15: I am pleased to inform you that pretty fair
progress is being made in the sinking of the engine-shaft below the 72, and the
lode appears to improve in character as we get deeper, and is yielding a little ore,
but as we are only carrying a comperatively small part of it in sinking I caused

NEW

gire you at present either its size or value, neither shall I be able to do so until we gire you at present either its size or take same to its full width. I have nothing read the 84, where we shall cross cut the same to its full width. I have nothing read to 84, where we cannot see to roor to you from any other part of the mine. The machinery is in good new for proof to 94, and we have a bout 20 tons of lead ore ready for market.

LLAN girl, a Kustl.—I. Knapp, June 20: I think we shall put the crusher and jigger LLAN gext week. We are very busy preparing ores for the crusher, and arbower have sing-floors. We have a large quantity of ores underground ranging and scarcely any room on the surface to dispose of them. The mine is broken, and sever.

ting the descretly any room on the surface to dispose of them. The mine is the and earned to a very list as very lists as very l

some and is yielding about 1 ton to be per lathorm. There is no alteracti as it wide; still work 5 tons of ore per fathorm. There is no alteracti as it wide; still work 5 tons of ore per fathorm. There is no alteracti as it wide; still work 5 tons of ore, and the ground beyond the 20 and the ground beyond the 20 and the ground beyond the still st

good many hands employed about our surface operations. All the old floors building the loading for the portable engine, and we ting for the incline plane to the crusher, and taking out ground for &c. At the same time we are puddling the bottom and sides of o make it perfectly water tight. The engine and pitwork are in d the water comparatively easy. The old engine is working about minute, and Gundry's engine 2½ strokes per minute. We sampled inpute 1) 373 tons of copper ore. [ORDDU.—Richard Rowse, June 21: I am pleased to say that the sed with west of winze has much improved since last reporting day; ing lode, and the part carried, 4 ft., is worth 35, per fathom, and ed up to prove if it is going on standing north of the 12 cross-out, show more of this. The water is short to keep the wheel going relater is in the bottom of the mine, and the men put to stope the stope in the same direction, in a lode worth 12, per fathom. The stope in the same direction, in a lode worth 12, per fathom. The hort; and, as a parting word, I give it as my slucere belief that you did Gorddu a good mining property, and that you have only to make to ensure a continuous and vigorous working of the work in hand, points I have laid before you to place the mine in a prolitable and the prolitable have have before you to place the mine in a prolitable and the points I have laid before you to place the mine in a prolitable supports.

nd the other points I have that before you to place and shaft, North Lode: Six Shift BRONFLOYD.—Thomas Kemp, June 21: No. 3 Shaft, North Lode: Six NEW BRONFLOYD.—Thomas Kemp, June 21: Foot shaft, about y ft., and

ong in the end of the ground 7 lins, high, and workt from 12 ft ration, and is improving going south into whole ground. In the ground is hard, but the nature of the rock is good, and to-day cited a small vein of blende. The two stopes in the 50 are worth r fathom. The lode in the 40 end is 1 ft. wide, and worth 7 cwts.

66 ETT.—W. Hancock, W. T. Bryant, June 19: The 102 to drive including the control of the

this day will show, and the prospects are good for a continuance of equally results.

PLYNLIMMON.—John Garland, June 20: In sinking the new shaft below the 24 good progress is being made; this shaft I expect will be deep enough for the 36 about the end of next week, when driving will be commenced. There is no change calling for remark in either of the two winzes sinking below the 24; fair progress is being made in each of them. The two stopes over the 24; cast of new winzes, maintain their produce per fathorn as given last week. Drawing and dreeing are being pushed on towards another sampling. The weather here is

very hot and dry; our surface water is falling off very rapidly—we have barely sufficient to last out the present week. Everything shall be done to keep the

yery hot and dry; our surface water is falling off very rapidly—we have barely sufficient to last out the present week. Everything shall be done to keep the pumping-wheel going as long as possible.

PRINCE OF WALES.—J. Andrews, June 20: on Saturday last the stope in the bottom of the 53 west of cross-course was again set to six men, at 4/. per fm. The lode in the stope is 4 ft. wide, and worth 15/. per fathom. All the tribute pitches have a month longer to go before their contracts will be out.

RED ROCK.—John Kito, June 16: I have nothing particularly new to report to you since my last. Very good progress is being made in the development of the mine, and the prospects are very encouraging. The shaftmen are now preparing to fix a new lift of pumps at the 60, and as soon as this is completed the sinking of the main engine-shaft will be resumed. We have commenced to cross-cut the lode to full width in the 60, both east and west of the engine-shaft, and in the latter the lode is very strong, and is letting out a great deal of water, and presents very good indications. We are clearing the 10, east of the eastern shaft, and putting the same in through repair, with a view to driving it eastward into new ground, and are likewise repairing the shallow adit level westward into the mountain, for the more express purpose of effecting a communication with the deeper levels and to ventilate this part of the mine, which will enable us to extend our works of development in this direction.

RELISTIAN CONSOLS.—J. Curtis, June 20: We have an increase of water from the south side of the 24, and I think the south wall of the lode is near at hand. There is no other change to notice.

ROMAN GRAVELS.—Arthur Waters, June 20: The ends, winzes, and stopes throughout the mine are quite equal to the valuations mentioned in my general report of the 12th inst. The 65 continues to open out good ground for stopes, worth about 3 tons per fathom. We sell to-morrow 220 tons lead ore and 60 tons of blende.

St. PAGRICK.—Wm. Francis, June 20: I am

as fast as possible. The ground is rather stift in the trial shaft near the eastern boundary.

TALY BONT.—T. Glanville, June 21: No. 1 Lode: There is a great improvement of the lode in the deep adit level; the lode is producing some fine stones of ore, and 1 hope shortly to be in a postition to inform you that we have lead in good paying quantities.—No. 2 Lode: We have a very strong lode in the 17 cast composed of extronate of lime and spar, intermixed with some good stones of lead. The cross-cut north to cut this lode is full of leaders of rich lead, which is a strong indication that we are approaching a very productive lode.—North and South Lode: The deep adit level is looking very kindly, and as we advance further into the mountain we may fully expect to meet with large bodies of ore.

TANKERVILLE.—A. Waters, June 21: We are getting on well opening out for the plat, and driving the cross-cut towards the main lode in the 192. We are also making arrangements for casing and dividing the shaft, and inking drawing-lift rods, and so forth, from the 189 to the present bottom. The 189 east and 180 west of the shaft are both going forward in a strong profitable lode, the ends now being, over 34 fms. apart; the west end looks like opening out to a great course of ore. The winze below the 180 cast, and the winze below the same level west of the shaft, are each worth 4 tons per fathom. The stopes and other points are as for some time past.

TEESDALE.—T. Watson, June 15: The men are now stoping down the vein

west of the shaft are both going forward in a strong protected between the ends to we being aver 36 fms. apart; the west and looks like opening out to a green course of ore. The winze below the 180 east, and the winze below the same level west of the shaft, are each worth 4 tons per fathom. The stopes and other points are as for some time past.

TEESDALE.—T. Watson, June 15: The men are now stoping down the vein above the north end working. The vein is two branches, and we are working both with one stope; produce worth 1 ton of lead ore to the fathorn. We have cut in the north end cross-cut some small veins showing spots of lead ore, but have not reached the Sun vein yet. I have no change to notice in the north end, stope No. 2, this week. The vein in Hopkin's level has been looking much better this last two days; the men are sending out some very fair bouse to-day to the dressing-floors.—Surface Work: We have been short of water this week for doing much in the way of crusting rough stuff. We have gone through a good quantity of chats, but these raise ore slowly, as a great part of the crushed stuff goes into the single trunks and slime pits. We will get a truck of ore away next week.

THEEBEIGH CONSOLS.—J. Gifford, but 21: The ground in the cross-cut is stoped to the stuff of the consent of the consent fath of the consent from the head was the sent of the case of the stuff of the consent from the head was the sent of the case of the consent fath of the consent

PEDN-A-DIKEA CONSOLDATED.—W. Tregay, W. P. Irideaux, John Pope, June 21: On taking possession of these mines for the present company on Aug. 5 day. we started with a very full tutwork force, which has kept the explorations well in a forward state throughout. These exploratory works have given, and are now giving, remarkably beneficial results. In sinking below the 140, east of samp shaft, we have discovered a large strong lode, which has gone of behind the former workings, and to which we shall have to cross-out at the deeper levels; it is 5f. wide, and worth 26. per tathom. In the 160 west the lode is behind the short of the shaft 18d, per fathom. In the 180 west end the lode is worth 122, per fathom. In the winze in the bottom of the 120, west of Cobbler's shaft, the lode is worth 16d, per fathom. These two levels are now communicated, and the stopes are giving good results. In the 60 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom. In the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is worth 16d, per fathom in the 50 west end the lode is w

The men are getting on pretty well with the enlarging of Pressure shaft. The engine-house is raised to the level of the bob end, the engine is brought on to the mine, and I calculate to finish bringing home to-day the woodwork of the engine-house, and the roof of the engine-house and bolier house. Next week we shall be bringing home the boilers. ur sale of tin this month will not be so much as I expected, by reason of more coper ore being in the lode in some of our best stopes, which lessened the value of the tinstuff. We shall, however, sample on Tuesday next about 25 tons of good copper ore, and about 1 ton of precipitate copper. WEST GODOLPHIN.—W. T. Pope, June 29: We are pushing on everything as fast as possible. There is no change in the mine worthy of remark since my last report.

WEST GODOLPHIN.—W. T. Pope, June 20: We are pushing on everything as fast as possible. There is no change in the mine worthy of remark since my last report.

WEST GOGINAN.—John Kitto, June 15: The main shaft is now down about the BST GOGINAN.—John Kitto, June 15: The main shaft is now down about to first, below the 38, and considering the nature of the ground through which it is being sunk very fair progress is being made. We have passed through one or two small branches in the 36 cross-cut north, and the water is increasing, and so far everything tends to strengthen the opinion expressed in my last report that the main part of the lode was taken off in that direction. The winze sinking below the 24 for ventilation is still yielding ore, but there is no change in any other part of the mine.

WEST PATELEY BRIDGE.—D. Williams, June 21: The Craven cross lode in the 56 is steadily improving as we approach the run of rich ore ground going down in the bottom of the old surface workings, being at present over 5 ft, wide, composed of barytes, spar, and internixed with patches of lead ore. The branch of North Rake vein in the level east of cross-cut from No. 2 shaft has improved during the last few days, being over 1 ft. wide, carrying a leader of lead ore worth fully 5 cwts. per fathom. Four men to rise and stope the ore ground in the back of the level west of shaft; lode 2 ft. wide, worth about 10 cwts, of lead ore per fathom.—No. 1 Shaft: Two men to drive east upon the lode; the latter is 2 ft. wide, composed of spar, gossan, and lead ore, being saving work for dressing of good quality, and two or four men to cross cut north. The lode in the bottom of the new shaft upon Discovery lode is between 2 and 3 ft, wide, producing about 15 cwts. of lead ore per fathom, and promising for a further improvement. I hope to have the new office and the large working plan completed this month.

WEST ROSKEAR.—H. Stephens, W. Bennetts, June 21: The 12 fm. level driving west for Stephens' shaft is in a very promising lode, but not int

WEST ROSEAR—A. Stephens with the proposition of contract improvement. In WEST ROSEAR—A. Stephens shaft is in a very promising lode, but not into the run of ore ground yet. The ground is all little harder than usual, which has somewhat tending more and the proposition of the prop

oking well. -John Kitto, June 15: The lode in the engine-shaft

ready for market.

WHEAL UNY.—Wm. Rich, Matthew Rogers, Joseph Rich, June 12: The lode in the 160, west of incline-shaft, is worth 7% per fathom. The 160 east is worth 6% 6%, per fathom. The men will be cutting ground for bearers and eistern in Hind's shaft next week. The 150, east of King's shaft, is worth 6% per fathom. The 40 east is worth 9% per fathom. The 130 east is in a hard bar of ground, and the lode poor. The rise in the 60 west is worth 6% per fathom. We sold on Saturday 14 tons 13 cwts. 1 qrs. 9 lbs. of tin.

The Minerals and Lodes of the Santa Rita Mountains.—
The San Francisco Daily Post of May 26 has a long article on the properties of the Aztec Mining Company, and the writer says:—"The mines in the Tyndall district have been purchased by English capitalists from the original locators, and titles all perfected during the past two years. Among the members and directors of the company are Williston Blake, governor of the Bank of England; Lord Claude Hamilton, brother of the Duke of Abercorn; J. S. Glaustone, cousin of the Premier; Alexander Macdonald, M.P. for Stafford; the Duke de Gramont, Paris; and others of similar grade in France and Great Britain. It is without doubt that this corporation will proceed to the vigorous development of their property, as ample working capital has been raised, and by the middle of June a large force of men will be at work in the district. As the stock of this corporae

tion is held only for investment, and none of it is likely to ever come on our market, the report made to them by Professor Davis mus-be unaff-cted by local speculative needs, and possess also an in dependent value.

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The Mining Market: Brices of Metals, Ores, &c.

	L MARKET-LONDON, JUNE 22, 1877.
Pig, GMB, f.o.b., Clyde. 2 14 3- 2 14	English, ingot, f.o.b 72 0 0 73 0 0
Pig, GMB, 1.0.b., Clyde 2 14 3- 2 14	bars 73 0 0- 74 0 0
, Scotch, all No. 1 2 15 0- 3 5	refined 74 0 0
Bars, Welsh, f.o.b. Wales 5 10 0 - 5 12	Australian
in London. 6 0 0 - 6 5	Banca
, Stafford., , . 7 10 0- 8 15	Straits 68 5 0- 68 10 0
in Type or Tees 6 0 0- 6 5	Strates
. Swedish, London 9 15 0 10 0	COPPER,
Rails, Welsh, at works 5 0 0- 5 5	Tough cake and ingot. 74 10 0- 75 0 0
Railway chairs	Best selected 75 10 0- 76 0 0
, spikes	Sheets and sheathing, 81 0 0
Sheets, Staff., in London 9 0 0-	Fiat Bottoms 84 0 0
Plates, ship, in London 7 5 0- 7 10	Wallaroo (nom.)
Hoops, Staff 7 15 0- 8 10	
Wail rods, Staff. in Lon. 7 5 0- 7 12	Other brands 74 0 0- 75 0 0
STEEL.	Chili bars, g.o.b 68 15 0
English, spring14 0 0-23 0	O December Process
, cast25 0 0-45 0	PHOSPHOR BRONZE.
Swedish, keg16 0 0	
fag. ham17 10 0	Other alloys £120 0 0- 140 0 0
LEAD,	BRASS.
English, pig, common 20 5 0-20 10	0 Wire 8d
T D mom 00 10 0 00 15	0 Tubes10
M H HI 0.0	Sheets 9
shoot and han 01 15 0	Yel, met, sheath, & sheets, 7 - 734
mina no no	
0.0 % 0	Nails composition 834 - 934
blac 17 5 0 00 0	TIN-PLATES.* per box.
mutant shot 04 10 0	Charcoal, 1st quality 1 26- 1 3
Spanish 20 0 0-	, 2nd quality 1 1 0- 1 1
	Coke, 1st quality 0 19 6
QUICKSILVER.	, 2nd quality 0 17 6- 0 18
Flasks of 75 lbs., ware. 7 5 0	Black per ton 18 0 0- 18 10
SPELTER.	Canada Staff or Gla
Bilesian or Rhenish 20 0 0-	Canada, Staff. or Gla., 12 0 0 - 13 0
English, Swansea 22 10 0-	Black Taggers 450 of
Sheet zinc 24 0 0- 24 10	Black Taggers, 450 of 30 0 0-

*At the works, is. to is. 6d. per hox less for ordinary; 10s. per ton less for anada; IX 6s. per box more than IC quoted above, and add 6s. for each X. erne-plates 2s. per box below tin-plates of similar brands.

* At the works, 1s. to 1s. 6d. per box less for ordinary; 1os. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The general appearance of our markets is without change, but in places a little speculative feeling has prevailed this week, arising more, perhaps, from unemployed capital than anything e'se; but as it might increase, it ought not to be overlooked, especially as the course of the money market, but more particularly when there is any diposition to 'speculate for the rate at which money can then so obtained forms one of the principal items to be taken into accluation; and as cheap money affords easy means of financing and materially contributes to the success of speculative transactions, it is always a rule for a speculator before acting to ascertain how far he may be able to rely and reckon upon easy rates; at the same time he ought not to be altegether guided by them, for although they possess certain advantages, yet they are sometimes an evidence of sluggish trade. And when that is the case they are rather apt to mislead than otherwise, as, for instance, during the past year money has been so plentiful, and offering on such casy terms, that any speculator taking that as the main reason for operating will see this have found out the mistake he committed; nevertheless, cheap money it not been for the slight value of money, metals to assain prices; indeed, had it not been for the slight value of money, the two sustain prices; indeed, had it not been for the slight value of money, the two sustain prices; indeed, had it not been for the slight value of money, the two sustains prices; indeed, had it not been for the slight value of money, the two sustains prices; indeed, had it not been for the slight prices; indeed, had it not been for the slight solution of the propers depression can be plainly discussed, so far regard

day have been triffing, and for the most part not exceeding 5s, per ton. On Monday the charters for the first fortnight of this month were telegraphed as 1200 tons only, and this produced the usual momentary effect, leading the sanguine members of our market to imagine that prices were about at once to take a leap upwards, and sellers very naturally tried to turn the advices to some account, and for a short time they succeeded in keeping the market steady; but finding no impression could be made upon buyers generally, and that the first effect was fast wearing off, they came to the conclusion that it was useless to attempt to demand any higher rates than before, especially as that price was becoming difficult to obtain from the majority of buyers, and it very soon followed that 68t. 18s. was reported to have leven taken for Chili bars, and we think sellers have every reason to congratulate themselves that they have been able to realise so good a price, for the market still continues in its former artificial state and until agree spreportion of the tock has charged hands there will be no security, and buyers will have to exercise extreme caution in all their transactions for fear of any suidem collapse.

Of course to enable sellers to dispose of a few thousand tons they must be prapared to submit to a concession in price, and they may just as well do so first as last, for in the end the sacrifice will have to be make matters worse both for themselves and others, for holders can derive no benefit by piling up, and it only stops trade and detroys confidence. There are not only the accumulations of Chili produce going on, but also other kinds of similar quality, which it brought upon the market (and it is not at all improbable that from force of circumstances that they will shortly have to be realised), and in that case will produce a very serious depreciation, but the question may well be asked why should copper form a exception to every other commodity? There is general depreciation in the value of nearly everyth

market has seldem been in a more unsatisfactory con-Inon.—Our market has seldem been in a more unsatisfactory condition then what it is at the present time, there are but few orders to be o'tained, and there only at prices which ironmasters declare leave them a positive lose, and yet they have no chance of realising more; but, on the centrary, may have to accept less, for the trade is in that deplorable state that no increased demand is anticipated, and the competition, notwithstanding the reduction of realist, is so great that

buyers can almost dictate their own terms, and if sellers display any unwillingness to submit buyers have only to abide their time, in the full conviction that at no very distant date the works will come down to any reasonable limit. It is really becoming quite painful to have to be so repeatedly recording from time to time that there are no signs of improvement, and that the transactions are, on the other hand, getting more limited, and prices continually sinking. The interests that are at stake in this trade are of such vast importance as to require an immediate remedy, and urgently demand the serious consideration of the most influential body of coal proprietors and inomasters. If the times are so exceptionally bad, and ruln is being brought upon the works under the present system, it seems shard to prolong it, and revisions and readjustment should at once be made without a moment's delay. Deputations should be organised to wait upon the owners of mines, collieries, and works, to see whether some modifications cannot be agreed to, and all should pull together and endeavour to regain that which is lost, for unless the owners of such property are willing to temporarily ease the conditions of the leases the ironmasters, one after the other, will have to succumb, and utterly abandon the property.

It is useless to leave things any longer in their present state hoping that in course of time the trade will recover. We want something to be done now to stimulate the demand, and give work to the unemployed. Some of the works are merely being carried on to prevent the men from receiving parish relief, and thus burdening the works in that manner. If we continue on the downward tack until the winter, the amount of distress and suffering in the various fron districts will be something fearful to contemplate, and it is an imperative duty on the part of owners and proprietors to look into affairs and see what can possibly be done to alleviate the distress, to help the ironmasters and to promote the iron trade of the countr

ave suipments (n the mst nve ye	ares:			
1877	1876	1875	1874	1873	
194,083	201,014	236,903	184,080	291,340 t	ons
Week end	ing June 16, 187	7		Tons	10,738
Week end	ing June 17, 187	3	*************	************	7,626
	Increase		************		3,1 2
	Total decrease f	or 1877			4,06
Imports of M	iddleshorough pi	g-iron into G	rangemouth:	-	
Week end	ling June 18, 187	7		Tons	6,898
Week end	ling June 17, 187	6	***********	***********	5,110
	Increase	******************			1,788
	Total increase for	or 1877			29,618

Tin.—The deliveries for the first half of this month, as far as can be ascertained, have been very fair, and the arrivals as yet have been very small, probably about a tenth only of the deliveries. The stock of Straits is slowly but gradually diminishing, and is not likely to be replenished, for the shipments from the Straits are exceedingly light, and the price obtainable here is evidently beginning to make a snable inversion upon the snuply. The importations of Dutch tin

likely to be replenished, for the shipments from the Straits are exceedingly light, and the price obtainable here is evidently beginning to make a sensible impression upon the supply. The importations of Dutch tin have also considerably fallen off, and stocks of Banca and Billiton in London have dwindelled down to very little, and our market is now dependent chiefly upon the supplies from our own colonies. In one respect this is a matter for congratulation, for if the English mines are pretty well exhausted, or can only be worked to a profit when prices are much higher, there is no one we should be so well pleased to succeed us as our own colonies. Nevertheless, if they wish to realise fair profits, and support the market, they must exercise prudence, and not continue to Inundate us with their tin, or they will do no good for themselves for a long time, and ruin everybody else connected with the trade. Of course, it there are large profits attached to the production, and they can afford to see the price declines till further and then be doing extremely well, they are justified in pressing supplies upon us; as prices get lower fresh outlets will open up, and our power of consumption will increase, and what may appear an over-supply uow may not prove enough hereafter.

But we are rather inclined to think that, with a little management future supplies might be regulated more in accordance with the existing demand, and for the following reasons—that several of the mining commanies of Australia and New Zealand that started on the first discoveries have failed, and the workings have been abandoned as being no longer prolitable. It was one thing to work them when the price of Straits commanded 15% per ton, as in the year 1872, but a very different affair now, with the price not half so much, or about 5% only. Then, again, almost every Australian merchant suddenly became an importer of tin, and it was scattered about far and wide, and the market was rapidly brought down by constant underselling. Now, however, there see

to be considered is supply and demand, as that, sooner or later, bring the markets to their proper level.

As yet the markets are quiet and very steady, but in the age of telegraphy there is no dependence upon them from one day to another, and although there may be nothing transpired to day to outwardly influence them either one way or the other, yet to morrows news might create great excitement. Since the same mean-of judging of the merits of this metal are as much open to one as to another, we feel there is no occasion to offer any remark of our own as to the advisability of buying or selling at the present moment, as the nature and extent of the risks on either side are pretty generally known and understood.

QUICKSILVER.—At the beginning of the week 7t, was accepted for Spanish, but on Tuesday the price improved 2s, 6d, per bottle, and on Thursday offers below 7t, 5s, were declined. To-day sellers of Spanish are indiff-rent about selling even at the highest price, and there appears little chance of doing better.

and there appears little chance of doing better.

TIN-PLATES.—Prices have teen quoted slightly higher, but orders cannot be obtained at the advance, and makers have had to give way again. Common coke are obtainable at 17s. 6d. to 17s. 9d.

LEAD.—The price of English is quoted 5s. per ton lower, and the arket remains very dull.

SPELTER.—Silesian has further declined, also sheet-zinc.

STEEL.—The quotations both in English and foreign are unchanged, but there is very little business doing in English. German is steady, and the price is slightly hardening.

THE IRON TRADE—(Griffiths's Weekly Report).—Friday Evening. Business was down this morning on the Gra-gow Exchange in G.M.B. warrants at 54s, 4½d., and this afternoon at 54s, 6d., closing firm with buyers at this latter figure. The price last week was 53s, 9d.; to-day's quotation, therefore, shows an advance on the week of 8d. per ton. We quote makers' No. 1 iron:—Gartsherrie, 82s.; Collness, e5s; Caldref, 82s. 6d.; Lungloun, 62s.; Saufmecke, 59s. 8d.; Monkland, 55s. 6d. fo.b. Glasgow; Glengaroock, 59s. 8d.; Eglinton, 55s. 6d. fo.b. Ardrossan; Shotts, 69s. fo.b. Leith; Kenniel, 64s fo.b. Boirces. The Birmingham Quarter Day is fixed for Thursday the 12th prox., about three weeks hence. It is decided that no change will take place in the price of iron this Quarter Day. The prices of Staffordshire marked bars will remain 9d. per ton, and as the Earl of Dudley's Round Oak brand will be 9d. 12s. 6d. per ton. It is true that the foreign demand for iron is very slack, and the bulk of the orders for common iron consumed in London are taken by Belgian makers. There is no help for it, Belgian labour being only two thirds of the price of Staffordshire. The Bellian manuracturers have a great advantage, which gives them the orders for common iron. The Staffordshire makers, with the present price of coal, which cannot be lower while the men work only eight hours a day, have only one alternative—they must have 9d. per ton, or clo e the works; the smelters have already been driven to the latter alternative. More than half the furnaces in Staffordshire are already blown out. The sage of the surface of the saffordshire was depth on the subject, and will be found in the Birmingham Daily Post of June 2, and the Iron Exchange of June 23. The hot weather interferes much with puddling in all districts, and as the summer advances this obstacle will, no doubt, be much intensified, and the quantity of iron manufactured in this country will be much diminished. Our market has been quiet all the week. The orders are entirely of a normal ch

Messrs. HARRINGTON, HORAN, and CO. (Liverpool).—COPPER: Arrivals here during the fortnight of West Coast, S.A., produce—Galicia, from Valparaiso, 700 tons bers, 100 tons ingots; Lucayas, from Valparaiso, 135 tons bars: Our Queen, from Valparaiso, 200 tons bars.—At Swansea: Glamráno, from Galico, 596 tons ores. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

Liverpool	Ores. 620		legulu 2 30		Bars. 9,749	I1	ngots.		a.
Swansea	3324	*****	4984	*****	2,462	*****		10	
Total	3944	**:***	7014	******	12,211		_	10	•
Kepresenting about 15	, 163 to	nsfine	CODD	er. acra	mat 15.5	27 tone	Maris	11 - 19 160	tome
June 10, 1870; 13,676	tons Ju	ne 15.	1875:	17.000	tons J.	me 15	1874		
According to the Box	ard of	Frade	Retur	ns, the	total in	norte	and ov	norta inte	and
from this country for	the fir	st five	mont	hs of t	he follo	wing y	ears w	ere:-	, and
IMPO	RTB.				875	187	3	1977	
Copper in ores .	*** ****		1	fons .	2,406	3.9	41	4.692	
Ditto roomly	0				T COLOR	4			

Ditto, regulus Ditto, bars, cakes, and ingots In pyrites (estime ed)	7,750	*****	6,240	*****	7,434	
Total imports	35,669		\$2,010		37,911	
Englist capper, wrought & unwrought Foreign capper, unwrought fellow metal	5,621	*****	9,155 6,465 5,112		6,665	
Total exportsvalparaiso the	19,991 compa	rative	20,732 expo	rts of	22.970 fine copper	ľ

from Chili and Bolivia to all parts of the world during the first three mesh the following years were - 1877, 12,669 tons: 1876, 13,485 tons: 1875, 12,344 tons: 1871, 12,289 tons: 1873, 5563 tons: 1872, 12,143 tons: 1871, 10,171 tons: 1871, 10,171 tons: 1871, 10,171 tons: 1877, 1876, 1875, 1874, 1874, 1875, 1874, 1875, 1874, 1875, 1874, 1875, 1874, 1875, 1874, 1872, 1871, 1875, 1874, 1875, 1874, 1875, 1874, 1875, 1875, 1874, 1875, 187

tons fine, against 5671 tons June 15, 1870.

Messrs, Fry, JAMES, and Co.—COPPER has varied but slightly for several weak
the demand continuing inactive, and it is doubtful if buying would be materially
stimulated by reducing prices at the moment —IRON is without change.—IN
has been in small demand but sufficient to keep prices steady. —IRAN has
with prices still a trifle easier. —SPELTER is flat, but rather from an excess of
supply than falling off in consumption. — TIN-PLATES continue steady.

The MINING SHARE MARKET has not been so active this week and while one or two mines have receded in value, our quot

and white one of the problem of the

Van. Van Consols. Glyn, Hing-ton Down, Devon Great Consols. Parys Mountain, East Van, Leadhille, Roman Gravele, Tankerville, and a few others.

Shares in Tin Mines continue flat. South Frances, \(\frac{1}{2} \) to \(\frac{1}{2} \) is at the meeting in Cornwall, the accounts showed a loss on the six months' working of 1576l., and a debit balance of 1916l. A call of 8s. per share (1550l.) was made. During the last nine weeks 43 tos of tin had been raised and sold; during the previous 15 weeks no returns had been made at all. The agent states that the mine looks well and is about meeting cost, and with anything like an ordinary price for tin good profits should be made. West Basset, 1 to 1½ sellers; at the meeting the accounts showed a loss on the quarter of 2500l., and a debit balance of 5077l. A call of 6s. 81, per share (2000l.) was made. The tin sold (138 tons) realised 533l.; copper, 345l. The costs for three months (to April 21) was 7018l.; merchants bills, 679l.; coals, 414l. Some little misunderstanding appears to have arisen at the meeting through the purser hesitating to place the bank-book on the table, and upon his subsequently doing so it was discovered that the account was overdrawn more than 2500l (equal to a call of nearly 4l. per share). Banking charges for the last 12 months were found to be 1200l. for interest, &c. No mention of this was made in the accounts sent out to the adventurers, and the purser is said positively to have refused to send out a balance sheet to the adventurers, although strongly unged to do so, and eren said he had not one. Banking charges of 100l. per month are altegether unprecedented. Seventy men have been discharged, as it impossible to pay costs at the present price of tin, and the bottom of the mine is not looking so well. Tincrofts have been very flat, and leave off 14 to 15. Delcoath, 30 to 32; Carn Brea, 32 to 34; Cooks Kitchen, 2 to 2½; East Pool, 9 to 9½; South Condurrow, 75 to 8; South Crofty, 10 to 11; West Godolphin, 2½ to 3; Wheal Kity (8t. Agnes), 2 to 24;

sale of ore of the mine. South Caradon, 110 to 120; the sale here realised 30584. 2s. Marke Valley, to 1½; the 380 tons of copper or realised 13554. Hingston Down, \$\frac{1}{2}\$ to \$\frac{1}{2}\$; 152 tons of copper realised 4554. 2s. Parys Mountain, 8s. to 10s.; another small branch containing rich ore has been met with in the 90 cross-cut south. East Caradon, 3 to 1; the sale of ore on Thursday—100 tons—realised 1453/. 19s. Penstruthal, 8s. to 10s. West Seton, 29 to 31; a good discovery is said to have been made near the boundary of New Seton.

taining rich ore has been met with in the 90 cross-cut south. Est Caradon, \$\frac{3}{2}\$ to 1; the sale of ore on Thursday—100 tons—realised 14534, 198. Penstruthal, \$\frac{3}{2}\$ to 10s. West Seton, \$\frac{9}{2}\$ to 3]; a good discovery is said to have been made near the boundary of New Seton. West Tolgus, 60 to 62; very little change here. The sumpling is 400 tons of copper ores. Wheal Crebor, \$1\frac{1}{2}\$ to 2; in the 120east the lode is 6 ft. wide, worth 20t. per fathom. Stopes in back, 10t. The 108 end east is 3 ft. wide, welding good saving work. Stopes, 15t. and 10t. per fathom. The 148 end east is 3 ft. wide and worth \$0.5\$ to 10t. per fathom. The new shaft is progressing satisfactorily.

Among Lead Mines Roman Gravels are 10 to 10\frac{1}{2}. The 55 continues to open out good ground for stopes, worth 5 tons per fathom. The sale this month—200 tons of 'ead ore—realised 2597.10s.; blende, 60 tons, 204t.; total, 282tt. 10s. The previous month's sale realised 2935t. Van, 35 to 35. East Van, 5 to 5\frac{1}{2}; the level in the branch west from Tempest shaft still looks favourable. The stope over the cross-cut A is improving for 1-ad. North Laxeys have been largely dealt in, and leave off 20s. to 22s, 64. The lode in the shaft is 3 ft. wide, and is more favourable for sinking. In the 70 consecut a small vein of blende has been intersected. In the roaf of the 60 for 7 fms. high there is a good lode, worth 1\frac{1}{2}\$ to 2 tons of lead per fathom. Glenroy, 20s. to 25s.; the shaft is down 2 fms. below the 60; lode 8 ft. wide. Tankerville, 7\frac{1}{2}\$ to 7\frac{1}{2}\$; the slow when the 60 to 13; East Craven Moor, 10 to 10\frac{1}{2}\$; West Craven Moor, 12 to 13; East Craven Moor, 10 to 10\frac{1}{2}\$; West Craven Moor, 12 to 13; East Craven Moor, 10 to 10\frac{1}{2}\$; West West Valley, 3 to 4\frac{1}{2}\$; Pur with a gradual increase as the mines are laid open. The lodes at the depth opened upon appear to be of great richness, and are valued by him at 150%, per fathom, and being in granite and adjoining the Vieille Montagne he forms a high opinion of their personent rails. manent value.

The Market for Mine Shares on the Stock Exchange during the The Market for Mine Shares on the Stock Exchange during the week has maintained a firm tone; indeed, it is said to have been one of the healthiest weeks known for a long time, although the transactions were not heavy, nor the prices good. The gradual absorption of stock said to be observable indicates that investment business is taking the place of speculative; the market thereby becomes sounder, the transactions more legitimate in character, and in result more generally satisfactors. At house the great difficulty comes sounder, the transactions more legitimate in character, and in result more generally satisfactory. Although the great difficulty of raising capital for the development of the most promising undertakings certainly causes much temporary inconvenience, it is probably to the advantage of industrial progress generally that capitalists are becoming alive to the fallacy of relying upon the new "systems" of financing from time to time proposed. Bonus share, guaranteed dividends, and bogus debentures are now becoming so thoroughly understood by investors that it may be hoped that the last has been heard of them, and that the return to a legitimate business principle will have the effect of restoring confidence and facilitating the speedy development of every enterprise really and facilitating the speedy development of every enterprise really worthy of the capitalist's consideration. It does not follow that because 100,000% has been expended upon a mine without bring-

apital, and confidence

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decess. Half a ton of ore, described as from the bottom of the saft, has been sent to London for the inspection of intending ingestors. The vendor is Mr. Joshua Maxfield, who has a seat on the direction.

Yorke Peninsula, \$\frac{1}{2}\$ to \$\frac{2}{3}\$; Preference, \$\frac{1}{4}\$ to \$1\frac{1}{4}\$; the report of the directors, prepared for presentation at the meeting on Friday, is considered very encouraging. The low price of copper has diminished the company's profits by from 2009/, to 3000/, but they point out that whilst the ore raised and sold from the Kurilla Mine point out that whilst the ore raised and sold from the Kurilla Mine joil in the year ending March, 1877, was about 13,000/, and this resil has been arrived at without picking out the eyes of the mine. The directors strongly urge the shareholders to pay off the arrears of dividend by the creation and issue of additional preference shares, which will free the company from a heavy weight, and enable both classes of shareholders to look forward to a prosperous fature with confidence. New Zealand Kapanga, 2\frac{1}{2}\$ to 2\frac{1}{2}\$; both the report received by the mail this week and also a telegram to hand are considered good. The progress made in the various undergened works is satisfactory, and the lode is turning out rich quartz. From the letters accompanying the report it would seem that Captain Thomas is anticipating some good discovery.

St. John del Rey, 300 to 320; the telegram received on Tuesday gives the produce for the first eight days of June at 10,750 cits, of the value of 4165/t, he ley of the ore being 75 oits, per ton. The general work is progressing favourably. With regard to the mine departments, the last advices state that during the first two weeks of May the force was sufficient to occupy every desirable point for carrying on the timbering, stoping, and timberwork. The duty priorined was 30 67 wagons per borer for the 14 days, or daily 19 per borer, which is large duty. The timbering of the levels injured during the heavy rans

firms have already received confirmation of the intelligence that the revolution having ended, labourers were returning to the mines, which were continuing to open out in an encouraging manner, lichmend, 6 to 6½, the manager reports that the further vising on the first discovery from the drift run westerly from the main shalt at the 500 ft, level was stopped for want of air, it being at the time up over 70 ft. The winze sunk below the 500 ft level was down 50 ft in ore. There is thus at this point a proved thickness of 120 ft in ore. He states that preparations for st-ping were being make, but enting out on the level named and putting in timber, and that where he are was opened out it was booking very well. With the view to complete the was opened out it was booking very well. With the view to complete the return of the state of the firm the 400 ft, level was being driven to bits, and that it is thought that these important communications with the new ore to be made, and its hreadthand length tested. The further discovery of the order of the present, and it is evident from the many parts that the further of the standard piper with the form the standard piper with the same object in the protein of the Richmond properly if the last week's telegram it appears that the Richmond authorities at Eurola form up to the cropping in the "Tip Top" protein of the Richmond properly if the last week's telegram it appears that the Richmond authorities at Eurola fedical to shart the furnase struck, may, it is said, nove to be anoutlying protein of the same profit that until the ventilation was effected no great amount of ore could be got out of the new discoveries as rendering the Richmond authorities at Eurola fedical to make out of the interest profit that until the ventilation was effected no great amount of ore could be got out of the new discoveries as rendering the Richmond authorities at Eurola fedical to make the could be got out of the new discoveries as rendering the Richmond authorities at Eurola fedical to make the

Mhe "more valuable than ever," but if this be so time is required to complete file works necessary to develope them advantageously.

Exchequer, \$\frac{1}{2}\text{ to }\frac{2}{2}\$; the foreman describes the recent discovery in the 400 ft. level to be \$18\$ in \$-to 4\$ ft. wide, opening out a large body of ore, referred to in the local newspaper] as to some extent native silver. Since the new underground foreman was appointed the mine is improving. It is understood that there is a prospect of the capital required being subscribed. I.X.L. \(\frac{1}{2}\) to \(\frac{1}{2}\); no formal report has been received this week, in consequence of the absence of the manager in \$S in Francisco. By information gained from other sources good ore, it is understood, was being stoped, and that the developments were progressing satisfactorily.

The Market for Hydraulic or Gold Washing shares has during the week been quiet, and prices remain unchanged. The water sea-

The Market for Hydraulic or Gold Washing shares has during the week been quiet, and prices remain unchanged. The water season has been prolonged beyond the time anticipated, but the quantity is much below that of previous seasons. Oregon, 4 to 4½; a telegram received on Monday announces that the result of another clean up leaves a profit of \$700. As the agent had only some 150 in of water to use the result is considered satisfactory. Cedar Creek, I to ½; the agent reports all work progressing in the usual manner. He has had sufficient water to enable washing to be steadily persevered with.

Lead Mines fairly firm, but without special change in quotation,

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56 to 4/2. United Mexican, 1/4 to 2; Port Phillip, 7-16ths to 5/2; Hultafall, 5/2 to 6/3; Oregon Preference, 4 to 4/4.

COLLIERIES.—The coal trade still goes on without any material alteration, the markets in most districts being extremely quiet, steam and manufacturing coal being the only qualities for which there continues to be a good, and in some districts a growing, demand. Coal owners everywhere are continuing their efforts to reduce wages, and, as a consequence, we see one or two serious disputes, though the strike in Northumberland has now practically terminated. Some 20,000 men are, however, out of work in the Lancashire coal fields, without any immediate prospect of going in again. The men of the Aberdare and Plymouth Company have agreed to accept the 10 per cent. reduction, and work has been resumed. This breaks the terms of the award of 1873, which provided that the wages of the district should be uniform; but the neighbouring masters propose to set this right by giving notice of a similar reduction to their men. The cost of coalgetting is, therefore, clearly coming down, and the prospects of coilieries are consequently improving. We hear that the main coal at Alitami continues to open out in a very satisfactory manner. The shares remain at 4½ to 5. Mold Argoed are steady at 3 to 3½. Laly Halls are slightly firmer, the quotations being 5 to 0. New Sharlaton (Preference) are at 3 to 3½. There is no change, and perhaps none can be expected, in Cardiff and Swansea (1½ to 2) until after the meeting, which will be held next month.

Chapel House remain at 2½ to 3; we continue to hear excellent accounts of the company's business, which must indeed be exceptionally good to enable the company to make such profits as it is making at a time when most of the collieries are barely covering, and in many cases not clearing, their expenses. The sinking of the 15-th, shaft goes on rapidly, and brickmaking is being carried on energetically. Newport Aberearn and Bilson and Crump are out of the market at present. Thorp

At the Truro Ticketing, on Thursday, 2650 tons of copper ore were sold, realising 10,960%. 6a, 0.1. The particulars of the sale were—Average standard, 103%. 11.4.; average produce, 6\frac{3}{2}; average price per ton, 4%. 3a.; quantity of fine copper, 176 tons 4 cwts. The following are the particulars:—

Date. Tons. Standard. Produce. Per ton. Per unit. Ore copper. May 17, 31.6 \(\preceq \) 99 15 0 \(\preceq \) 74% \(\preceq \) 41 0 \(\preceq \) 6. \(\preceq \) 28, 5d. \(\preceq \) 20 6 \(\preceq \) 31, 13.6 \(\preceq \) 98 8 0 \(\preceq \) 744 \(\preceq \) 43 0 \(\preceq \) 12 5 54 \(\preceq \) 62 4 0 Compared with the last sale, the decline has been in the standard 4s., which is so small as not appreciably to affect the price per ton

The Rio Tinto Company notify that the funds required to meet the coupons of the Five per Cent. Mortgage (Spanish Coupon) Bonds, and of the Seven per Cent. Mortgage Bonds, and also the Seven per Cent. drawn Bonds, due on July 1, have this day been deposited with the company's ban-ers in London and Paris. Coupons for rayment in London must be deposited at the offices of the Sompany four clear days prior to payment, and those payable in Paris must be presented at the offices of the Société Générale de Credit Industriel et Commercial.

** With this week's Journal a SUPPLEMENTAL SHEET is given, With this week's Journal a Supplemental Sheet is given, which contains—Original Correspondence: Collieries in Yorkshire—Corton Wood; the Tin Trade—England and Australia: Mining in Colorado—Park County—No. IV. (C. S. Richar son); North America Gold Mining Company; Mining in the East—No. IV; Artificial Fuel (W. Gigney); the Exchequer Mine—Value of the Ore; Exchequer Gold and Silver Mining Company (A. Joy); New Quebrada Mining Company (A. Francis); Economic Portable Railway for Mines; Great Western Railway Steam Tramway Engines, Gold in Merlonethshire—Clogan Gold Mine; Mining in the Halkin District; the Mining District of Lharwst (H. W. Lamb); Tin Dressing; Ladywell Mine; New Bronfloyd Company (late Bronfloyd); A Singular Mine Report; Life's Difficulties; Remliu-Secnec; Parys Mountain Mines (T. Mitchell)—Silver Mines in Peru—Johnson's New Universal Cyclopedia—the Chemist's Manual—the Coal Trade, Slate Quarrying in Carmarthenshire—Treating Nickel and Cobalt Ores—Foreign Mining and Metallurgy—Foreign Mines—Registration of New Companies—Tempering Iron and Steel Gold and Silver Extraction—Improvement in Drilling Rocks—Hydraulic Coal Getting Machine; Manual-acture of Portland Cement—Manufacture of

Sulphuric Acid — Registering the Gauge of Railways — Patent Matters— Meetings of Pedn an-drea Consolidated Mines, Wheal Prussia, West Basset St. Harmon, South Wheal Frances, Roman Gravels, and New Sombrer Companies, &c.

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36, Throgmorton-street, London, E.C., April 28, 1877.

M INING INVESTMENTS.—The present time being considered a favourable one for mining operations, the ADVERTISER, who has had nearly 30 years' experience in mining—11 in Cornwall, and 12 in the management of mines in London—OFFERS his SERVICES in all matters relating to Mining Companies and advice in the selection of Shares in bona fide and well-managed concerns, either for investment or speculation.

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Natices to Correspondents.

whuse inconvenience having arisen in consequence of several of the Number during the past year being out of print, we recommend that the Journal should be field on receipt; it then forms an accumulating useful work of reference.

De f.led on receipt; it then forms an accumulating useful work of reference.

IMPORTANT NOTICE—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the Mining Journal't on many countries will be reduced to one fourth. Henceforth the subscription will be 1. 10s. 4d. per annum (36 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Ioeland and the Farce Islands), Egypt, Germany, Gibraitar, Grece, Heligoland, Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta' Turkey, Morocco, Tunis, and the Canary Islands. Spain II. 19s. (50 frs.)

Received,—"C. C." (Southtown): Letter was addressed "Southsea"." M. W."—"F. H." (Crediton)—"T. E." (Minmorfa)—"One Interested: Menheniot mine[r] selparture—"Reader".—"T. H." (Tavistock)—"M.P." (Colne)—"H.S." (Birmingham): We shall be glad to have the particulars—"Observer" (Parys Montain)—"Shareholder" (Van Cousols)—"M. de R." (Paris)—"Tourist" (St. Agnes)—"H.P. B.". (Norwood)—"Shareholder" (Old Treburgett)—"Shareholder" (Van Cousols)—"Shareholder" (Roman Gravels) should attend the meeting, and ask for the information he requires—"Enquirer:" Dr. J. Foulerton, Pembridge Villas, Bayswater, is the Secretary of the Geologists' Association.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JUNE 23, 1877.

OUR COAL ABROAD.

Our coal exports have been moving on at a good rate this year, although they have been scarcely so large as in the corresponding period of 1875. Including coal—that is, coal, coke, cinders, and period of 1875. Including coal—that is, coal, coke, cinders, and patent fuel—shipped for the use of steamers engaged in the foreign trade, 1,876,901 tons of coal were sent away from our shores in May, 1877, as compared with 1,844,544 tons in May, 1876, and 1,496,334 tons in May, 1875. The aggregate shipments for the five months ending May 31 this year did not, however, exceed 7,306,122 tons, as compared with 7,377,051 tons in the corresponding period of 1876, and 6,008,171 tons in the corresponding period of 1876. It is also noticeable that our coal exports to France have been rather falling off this year, having amounted to May 31 to 1,223,245 tons, while in the corresponding period of 1876 they were 1,305,057 tons, and in the corresponding period of 1875, 1,037,574 tons. It may be supposed by casual observers that the declension noticeable in this year's figures is attributable to the agitation arising out of the dubious policy recently inaugurated by Marshal MacMaHon, but this can hardly have been the case, since our coal exports to France in May amounted to 261,665 tons, while in May, 1876, they did not exceed 255,195 tons, and in May, 1875, 212 363 tons. We should be rather disposed to conclude that the slight falling off observable in the consumption of our coal in France this year wasdue. should be rather disposed to conclude that the slight falling off observable in the consumption of our coal in France this year was due to the dulness which prevailed, upon the whole, in French industrial operations, as well as in the industrial operations of Greet Britain. operations, as well as in the industrial operations of Great Britain. The beetroot sugar crop was not a good one in 1876; the last French beetroot sugar manufacturing season was, consequently, a comparative failure, and the consumption of coal involved by it was smaller than the corresponding consumption in the season of 1875-6. Hence a certain additional quantity of French coal was thrown unconsumed upon the French markets, and some of our coal would appear to have been displaced from them in consequence. However, the decline which has taken place in the consumption of our coal in France this year has not, after all, been of very much importance, and it may very possibly be recovered before the year has fully run its course. Germany ranks next to France among the foreign consumers of our coal, and the German demand has fallen foreign consumers of our coal, and the German demand has fallen off this year, as well as the French. Thus we sent 687,176 tons of our coal to the Germans to May 31 this year, the corresponding our coal to the Germans to May 31 this year, the corresponding movement in the same direction in the corresponding period of 1875 having been 777,333 tons, and in the corresponding period of 1875 622 745 tons. Our deliveries of coal have rather increased this year to Russia. Our shipments have also been larger to Sweden and Norway, Spain, Turkey, Egypt, Malta, and British India; but they have fallen off as remarks Denmark, Holland, Italy, and Brazil. Upon the whole, as has been aiready observed, our coal exports have barely held their own this year. held their own this year.

held their own this year.

When we come to make comparisons in the by no means unimportant matter of prices, we arrive at rather startling results. Thus while 1,231,125 tons exported in May, 1875, were valued at 832,654., 1,536,202 tons exported in May, 1876, were priced at no more than 856,8771. The decline in prices has acquired even greater importance during the last twelve months, as is proved by the fact that 1,562,265 tons exported in May, 1877, were priced at the still smaller sum of 787,9671. In making these latter comparisons we have not included coal shipped for the use of steamers engaged in the foreign trade; the figures given relate solely to direct exports. A similar result is observable when the comparison is extended to the first five months of this year, 5,871,774 tons exported to May 31 this year being months of this year. 5,871,774 tons exported to May 31 this year being priced at only 3,0°34,4634, as compared with 4,767,589 tons priced at 3,377,4284 in the corresponding period of 1875.

THE SUB-WEALDEN EXPLORATION.

After boring to a depth of 1905 ft. the Sub-Wealden exploration After boring to a depth of 1900 ft, the Sab Wealden exploration has been brought to a close without effecting the main object for which it was commenced; still, through the exertions of Mr. WILLETT, a good deal of light has been thrown on what was previously little more than matter for speculation. In the brief notice from Mr. WILLETT, which appeared in last week's Journal, he alludes to the scientific deductions of Prof. Prestwich with respect to the Palæozoic rocks, which were not found at the depth bored to. But there is no reason why these procks, should not be found as Mr. WILLETT. is no reason why those rocks should not be found, as Mr. WILLETT is no reason why those rocks should not be found, as Mr. WILLETT suggests, at other points in the South-East of England, or in the valley of the Thames. A little more importance may be said to attach to the subject from the fact that only last week there was a meeting in Paris of the Association for Constructing a Tunnel between England and France, when a report was read of the explorations made and soundings executed last year. The borings made by Mr. WILLETT have some connection with the scheme alluded to, for the zone in which it is proposed to pierce the tunnel, it is said, consists of a bed of clay perfectly continuous and homogeneous, so that the excavations could be made between the two shores through the same chalk system, and that gentleman proposes that the tunnel should be made through the Kimmeridge clay, which he proved to be over 600 ft. thick in the Sub-Wealden boring. On the other hand, Prof. Pressawich thinks that chalk would be unsuited for tunnelling, because of the latteral pressure of inland springs, and the probability of meeting with fissures, whilst the Paleozoic rocks, which at Folkestone would be found at from 300 to 400 ft. below the sea at Folkestone would be found at from 300 to 400 ft. below the sea level, would be better adapted for tunnelling. The Professor, in the same paper to which we have alluded, pointed out the light which same paper to which we have alluded, pointed out the light which explorations of the Palæozoic rocks must throw upon the question of the possible occurrence of coal measures beneath the South-East of England. This is a most important matter, and although the Palæozoic rocks were not reached by Mr. WILLETT, there is no reason why they should not be met with at a considerably less depth reason why they should not be met with at a considerably less depth than was gone to in the Sub-Wealden boring in other parts of the South-East of England. From the borings made at the brewery of Sir Henry Meux and Sons, London, the Palæozoic rocks of the Devonian periol were discovered, so that some of the Mesozoic or Secondary rocks, and the upper Palæozoic, consisting of the Permians and Carboniferous—the Devonian or Old Red generally found resting on the latter—being entirely wanting. This, of course, putsentirely out of consideration the finding of coal in the London district; but that those measures may be met with in some of the adjoining counties there is very little doubt. Rocks, it may be said, are divided into three classes—the Tertiary, the lowest being the are divided into three classes—the Tertiary, the lowest being the London clay and the Thanet sands; the Secondary, which includes

the Cretaceous formation, the Wealden, Oolitic, and Triassic; and the Primary or Palæozoic, which commences with the Magnesian limestone, following downwards by the New Red sandstone, coal measures, Carboniferous or Mountain limestone, and the Devonian or Old Red resting upon the Upper Silurian, consisting of Ludlow shale and Wenlock limestone.

This description of the strata will show that where the Palæozoic rocks of the Devonian period are reached without passing through carboniferous strata no coal is there. The want of these measures carboniterous strata no coal is there. The want of these measures may be accounted for in various ways, for during the geological periods deposition of certain materials went on uninterruptedly during the whole period in a certain area, in another locality during part of it only, whilst in another there would have been no deposition whatever, whilst disturbances would take place in one locality and not in another. We have a striking instance of this in Staffordshire, where the vast series of the Old Red Sandstone and the Carboniforne limestone series are notifiely wanting the valuable desnire, where the vast series of the Old Red Sandstone and the Carboniferous limestone series are entirely wanting, the valuable deposits of coal resting on the Wenlock limestone of the Upper Silurian. We merely adduce these facts to show how important it is that the problem commenced by the Sub-Wealden boring should be continued until it is thoroughly solved by operations in some other locality where the chances of success are more favourable, for there is no doubt whatever but what there are vast reservoirs of coal concealed in many parts of England that will be brought to light to the great doubt whatever but what there are vast reservoirs of coal concealed in many parts of England that will be brought to light to the great benefit of the country. We do not wish it to be understood that the object of the boring was for the purpose of seeing whether coal was to be found in a certain locality or not, but at the same time we thought it quite probable that were the Upper Palseozoic rocks penetrated the Carboniferous measures would have been met with. This, we believe, is also the view of Mr. GODWIN-AUSTEN in his very also weakly regard in which he discussed the question of the probable exable paper, in which he discussed the question of the probable ex-tension of the coal formation beneath the cretaceous rocks lying between the coast opposite Calais and the Somersetshire coal field. between the coast opposite Calais and the Somersetshire coal field. He pointed out the probability that the coal measures which tail out under the chalk near to Therouanne set in again near Calais, and thence proceeded in the line of the Thames valley parallel with the North Downs, and proceed under the valley of the Kennet. Professor Prestructure appears to agree with Mr. Godwin-Austen as to the existence of a coal trough broken into several detached portions, and with the evidence generally given by that gentleman before the Royal Commission. It is, therefore, to be hoped that the solution of the important geological question so ably initiated by Mr. Willett will not be allowed to rest in its present unsatisfactory state, but that fresh borings will be made either in the valley of the Thames or at other points in the South-East of England, and there ought not to be the slightest difficulty in obtaining the necessary funds, from the landed gentry in particular, who would be so greatly benefited were the views we have enunciated, or rather adopted, benefited were the views we have enunciated, or rather adopted, from such a high authority as Mr. Godwin-Austen, realised.

THE DYNAMITE PATENT.

The result of the trial before Mr. Justice Fry of the validity of the patent held and worked by the British Dynamite Company and Nobel's Explosive Company was given in last week's Journal, but from the interest taken in the matter a more detailed statement of the case is published in another column. Nobel's claim of 1867 embraced the absorbing of nitroglycerine in porous unexplosive substances. Kieselguhr, the absorbent actually used in dynamite, is non-explosive but not porous; in lithofracteur the absorbents used consist of both explosive and non-explosive substances. The Judge held that the use of any non-explosives in combination with nitroglycerine infringed the patent.

nitroglycerine infringed the patent.
The counsel for the plaintiffs were Mr. Aston, Q.C., and Messes.
Cutter and Chester, instructed by Messes. J. and R. Goole, solicitors.
The defendants were represented by Mr. Cotton, Q.C., and Messes. Nalder and Macrory, their solicitor being Mr. E. Woodard. The witnesses for the plaintriffs were Dr. Oding, F.R.S.; Dr. Dupré consulting chemist to the Home Office; Mr. W. T. Fewtrill; and Mr. George M'Roberts, the chemist to the British Dynamite Company, who thoroughly proved the chemical part of their case. Mr. Newton, the patent agent, was also called with respect to the patent. Mr. James Toye, a practical miner, was called to prove patent. Mr. James Toye, a practical miner, was called to prove that whilst lithofracteur was scarcely so strong as dynamite, the fumes were the same; and Mr. George H. Daw, the eminent gunmaker, of Threadneedie-street, was called to contradict a witness for the defence on the same question of fumes. The plaintiffs further called Mr. Orlando Webb, a mine and quarry owner, who proved that the description given in the specification was ample, and that it had enabled him to use up a quantity of nitroglycerine in his reseasion by turning it into a very serviceable dynamits.

and that it had enabled him to use up a quantity of introglycerine in his possession by turning it into a very serviceable dynamite, which was consumed in his own quarries.

The witnesses for the defence were Mr. Perry Fairfax Nursey, C.E., Mr. I. S. Linford, Dc. Adolf Gurlt, Mr. T. W. Keats, the chemist to the Metropolitan Board of Works, and Dr. Voelcker, the well-known agricultural chemist. The whole of these witnesses so far strengthened and proved the plaintiff's case that Mr. Justice Fry did not consider it necessary to call upon Mr. Actor to Inesses so far strengthened and proved the plaintiff's case that Mr. Justice Fry did not consider it necessary to call upon Mr. Aston to reply to the defendants' one. The case altogether was an exceedingly interesting one; it ran over four days, and was conducted by the leading counsel on each side with great ability.

COLLIERY PROSECUTIONS.

The cases relating to the Hagside Colliery, Radeliffe, near Manchester, belonging to Messrs. A. Knowles and Sons (Limited), referred to in the Mining Journal of last week, were heard at Bury, on Thursday, the 21st inst., before Richard Bealey and Edward Mucklow, Esqs. Mr. Samuel Mills, manager of the colliery, was fined for allowing open powder to be in the pit 22. 10s.; for having only one door, where there ought to have been two, between the main intake and return there ought to have been two, between the main intake and return air cours es, 11.; and for not having a correct report book, under

teral Rule 29, 11, with costs, fr. J. Heap, the agent of the colliery, was also fined for not proving that he had taken all reasonable means to prevent the contra-vention relating to the powder, 2l. 10s.; and as to the report book

The summonses were issued at the instance of Mr. Dickinson, Her Majesty's Inspector of Mines, Manchester.

THE CONSUMPTION OF COAL, &c.—A marked charge has undoubtedly taken place with respect to the home consumption of coal, which has set at defiance the calculations of Sir W. Jackson, Prof. Jevons, and all our great authorities who have written upon the subject. The annual increase in the production up to within a year or two ago from the year 1834 was at the rate of nearly 3,000,000 tons per annum, and on this basis the exhaustion of our 3,000,000 tons per annum, and on this basis the exhaustion of our coal fields in a given time were formed. But facts have turned out against the prophets, and that most unmistakably. According to the report of the Inspectors for 1876 recently issued, it appears that the increase in the quantity of coal raised in the United Kingdom during that year over 1875 was only 818,681 tons. But this increase was not occasioned by the want of home consumers, but quite the contrary, for it was considerably more then swallowed up by the marked increase in our exports. The quantity of coal exported in 1875 was 14,544,919 tons, and in 1876 it was 16,265,839 tons, or an increase of 818,681 tons, it shows that 902,239 tons less of coal was consumed in the kingdom in 1876 than in the previous year. It is increase of \$18,631 tons, it shows that 902,239 tons less of coal was consumed in the kingdom in 1876 than in the previous year. It is evident that high prices have led to greater economy taking place in our houses than was ever the case before, and does away with the anticipations of our ablest experts on the coal question, as well as the alarmists. The increase in our exports is in a great measure due to the low prices at which our colliery owners have been compelled to sell to maintain their position in many of the European markets against the competition of Gargan course, who have been markets against the competition of German owners, who have been endeavouring to undersell us. But the English coalowners have made considerable sacrifices to hold their own, working without profit—a fact which the miners and their leaders will scarcely give them credit for doing. But that they have done so we need only look

to the Board of Trade Returns, from which we find that the values coal exported in 1875 was 11s. 4½d. per ton, and that for 1876 call 10s. 3½d. per ton. These facts speak for themselves,

COAL AND IRON IN THE UNITED STATES.—The market for state rails has continued quiet at Philadelphia at about late quotaling there have been no sales of importance. Sales of lots of a few has dreat tons each are reported at \$47 to \$47\frac{1}{2}\$ per ton currency at mills. There are some enquiries for steel rails for South America and the West Indies, but it is stated that concessions will have to be made to meet foreign competition. The Pennsylvania Steel Company shipped during May upwards of 7000 tons of steel rails is actual production for the month having been 6040 tons. Iron rails are quoted in Pennsylvania at \$33 to \$36 per ton currency. The has been scarcely any change in the demand for manufactured imate at Philadelphia, except for bridge iron, which has been in rather a dultage unsatisfactory state at Pittsburg, but some little improvement anticipated next month. The rail market has been rather dultage in the state of th anticipated next month. The rail market has been rather dull a Pittsburg. Business in steel has fallen off during the last few webs at Pittsburg, but makers are still generally busy, many of the having sold considerably ahead of their production. The total was a still generally busy, many of the duction of anthracite and bituminous coal in Pennsylvania to May this year was 8,791,758 tons, against 7,021,718 tons in the corresponding period of 1876, showing an increase of 1,770,040 tons this year. The movement of coal and coke over the Pennsylvania nilvand to May 21 this year amounted to 2,837,855 tons.

QUICKSILVER.—The following figures show the depreciation in the value of quicksilver. Imports:—

April, 1875 453,900 93 600 April, 1876 554,755 ... April, 1877 545,855 73,702 55,682 ...

MR, JOSEPH PRYOR, F.G.S.—The numerous friends of Mr. Joseph MR. JOSEPH PRYOR, F.G.S.—The numerous mends of Mr. Joseph Pryor, of Redruth, have learned with regret that he is on the ered leaving England to inspect and report on mineral properties in Autralia, Tasmania, and New Zealand. He goes out as a commissione of several gentlemen in London and elsewhere. He carries with him the best wishes of all his friends, of enemies he has made nonhim the best wishes of all his friends, of chemics he has made home.

Mr. Pryor's qualifications are of a high order, from his education followed by practical experience, in the sciences of geology, mine extensive scale may be calculated as certain when his talents become known in the countries whither he goes. He has also the advantage of a high moral character, having always avoided the follies and vices usually incident to youth, and maintained a good reputation

PRAT CHARCOAL.—We learn from Oswego that Mr. Joseph Le, an experienced engineer, has left for Dublin, bringing some peatfrom the Syracuse Peat Works, for "the purpose of demonstrating the Dodge process of condensing peat, so as to be nearly or quite the equivalent of English coal. Mr. Lee visits Ireland as an apostle of love, to carry the great discovery as a boon to his country for utilising her valuable and immense deposits so as to be a first-class fuel. Peat charcoal is to be a great success.'

ANCIENT MINING IN IRELAND. - There is a very interesting article Ancher I alias of the Rilkany on Ancient Mining in Ireland in a late number of the Kilkeny of Archaelogical Society's Journal. After speaking of the working various parts of Ireland, the writer turns to West Cork. Ancient warious parts of freman, the writer tails to be contained in the west of the county of Cork. In 1846 Capt. Thomas, an experienced Cornish miss, while searching for copper on the lands of Derrycarhoon, near Ballyor cork. The white searching for copper on the lands of Derrycarnoon, near pany-dehob, came on some ancient workings; a neighbouring gentleman communicated to the late Mr. John Windele an account of the discovery, in which he states that they were six in number, all parallel bodies, one was about 30 fms. in length, 10 fms. deep, and 10 ft. in breadth, they were found filled at the bottom with rubbish, and at the bottom with rubbish with r top were overgrown with peat in some places to a depth of 14 A number of stone hammers were found at the bottom of the mi weighing from 3 to 7 lbs., similar to those already described as foun weighing from 3 to 7 lbs, similar to those already described as found in the bottom of the old workings at Killarney, also a curious sort of tub of oak, of a curved form, which was in the Dublin Exhibition in 1853, and a ladder of black oak 18 ft. long, formed of a single solid piece, having 14 steps not ched in the side. The lands of Demycarhoon are stated upon competent authority to abound in mineral wealth—the green carbonate of copper occurring near the surface.

THE DARCY LEVER EXPLOSION. - Some remarkable revelation were made on Wednesday at the adjourned inquiry into the explosion at Fogg's Pit, Darcy Lever, near Bolton. The explosion occurred on Feb. 17. Ten men were killed, but, owing to the pit taking fire, four of the bodies have only just been recovered. The coner (Mr. J. B. Edge) was assisted in his inquiry by Mr. Maule, QC, which had been invested on the latter of the control of the who had been instructed on behalf of the Treasury. The evidence showed that the pit was comparatively free from gas, the last time gas was reported to the manager being June 21, 1876. The book was never brought up the pit until it was filled, and only a portion of it could now be found. A collier named Huntley said they never of it could now be found. A collier named Huntley said they never knew until they tried themselves, whether the pit was safe. There was no one to lock their lamps before they went down the pit. Absalom Norris, the fireman, was supposed to examine all the working places, but he never marked them as safe or fiery. He met the anen once or twice a week at the bottom of the jig brow, and told them he had examined the places, and sometimes James Norris, his father, asked them to make the examination themselves. At other father, asked them to make the examination themselves. times they had to trust to all being right. After trying the places with safety-lamps, the men used to light candles and work with them. Powder was used in the mine, but there was no shot lighter, and the men fired their own shots. These things were never mentioned to the manager, because (said Hindley) the men were afraid of being dismissed. The enquiry was again adjourned.—[This ethence was denied on the following day by Absalom Norris, who stated that he never failed to see all was safe before work was commenced.—The inquest was adjourned until July 23, by which time it is expected the remainder of the bodies will be found.

SIMULTANEOUS BLASTING BY FRICTIONAL ELECTICITY.—On Saturday, June 16, a visit was paid by Mr. T. Atkins, Swannington, agent for Nobel's Explosives Company, accompanied by Mr. Harris, an officer of the company, to the noted granite quarries of Mesta Ellis and Everard, situate at Bardon Hill, Leicestershire. Previous to the investigation of the company of the property of the property of the company of the property of the property of the property of the company of the property of the pro to their arrival extensive preparations had been made under the superintendence of Mr. Smith, the foreman of the works. The blasting operations were performed on two sections of the quarry 130 yards apart. In each section three holes were drilled to an arrange depth of 20 ft. by Dunys, Paul. Filling M. A. Lingson death Dissuing operations.

130 yards apart. In each section three holes were drilled to an arrage depth of 20 ft. by Dunn's Rock Drilling Machine, and a charge of 15 lbs. of Dynamite was then placed in each hole. Capt. Brain's Electric Fuse was then carefully inserted into each charge, and the Electric Fuse was then carefully inserted into each charge, and the whole connected by a well insulated copper wire. The two sections were then coupled by a main cable, and formed an electric circuit with the machine. This was one of Capt. Brain's High Tension American Improved. It is a small instrument, only 13 inches by 13 inches and 5 inches thick, in a small oak box, and weighs only the best of the control of th 14 lbs. It is not liable to damp, will give a spark 2 inches long, and when charged one set of plates in the condenser are at a higher and the other at a lower potential than the earth. This is the great advantage. After a careful inspection of the cable, its connections, and all needful precautions taken, the whole of the six charges were fired at once, and a loud report was heard from both sections of the quarry at the same instant. Upon examination of the results in one section it was found that a mass of rock 44 feet long, 40 feet wide, and 65 feet deep, weighing upwards of 9000 tons was disledged and thrown down into the bottom of the quarry. In the other section, and here the work of denotition was still more comother section, and here the work of demolition was still more complete, the mass of rock thrown down measured 42 feet long, 36 feet wide, and 50 feet deep, and estimated to contain upwards of 5500 tons. The charging, insertion of electric fuses, and completing circuit, undertock considerably less than two hours. Mr. B. Everard.

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JUNE

June 21. were posts now that ment, but Yet it wou postponed ing indica waging wi of the houng workings of Dr. Fost fore, of 244 floor so in few concert those that 19 of copp copper, when and arseni set down f

evident fi year was each, while score or s known the ame from the operation the production area, and certainly either me the numb if at all, Dr. Fos awny wa several u

Plymouth the shaft had instr attend to Mr. Willi

Capt. rant

Th J. H. one of the proprietors, was present, and was highly pleased at the strengthious manner in which the work was performed, and the satisfactory results obtained. These experiments were upon a far large factory results obtained and the work of the strength of the Midland Counties, state than any which have been attempted in the Midland Counties,

MINIS ARBITRATION.—Capt. Southey, of West Chiverton and the mines, has just returned from Sweden, after a fortnight's morant mining dispute in that country. The dispute arose out of ortant mining dispute in that country. The dispute arose out of the practicability, or otherwise, of dressing certain lead and blende the practicability. Southey's opinion is that they can.

REPORT FROM CORNWALL.

REPORT FROM CORNWALL.

| June 21.—A little before Christmas we were hoping that the New year would see an improvement in the Tin Trade. Then our hopes year would see an improvement in the Tin Trade. Then our hopes year would see an improvement in the Tin Trade. Then our hopes that midsummer is just come, not only is there no improvement that midsummer is just come, not only is there no improvement that midsummer is just come, not only is there no improvement in the midsummer is just come, not only is there no improvement in the midsummer is just come, not only is there no improvement in the midsummer is just come, not only is there no improvement in the midsummer is just come, not only is there are not want-postposed the prospect is somewhat brighter. There are not want-postposed the prospect is somewhat brighter. There are not want-postposed the producers than it at one time appeared.

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If the midsum there are the names of 193 mines and underground although there are the names of 193 mines and underground although there are midsummer in the report workings under the Mines Regulation Act set down in the report workings under the Mines Regulation Act set down in the report workings under the Mines Regulation Act set down in the report workings under the Mines Regulation Act set down in the report workings under the Mines Regulation Act set down in the report workings under the Mines Regulation Act set down in the report workings under the Mines Regulation Act set down for Cornwall 25 of tin, hose that are metalliferous there are set down for Cornwall 25 of tin, and glocopper, though store that the others include silver, copper and zinc, copper, though store are several of copper and arsenic, tin, and silver, copper, though stown for 9 mines of tin, 14 of copper, 9 of tinn, 9 of manganese, the set of the second from the significant fact that their total prod

sither more names, or very little more, in Coriman; and as to Devon, the number of metalliferous mines in active operation cannot much, if at all, exceed 30.

Dr. Foster continues his raid on those who are responsible for unpotected mine shafts. At Helston, on Saturday, Mr. Charles Trejavy was summoned for having on his land in the parish of Breage seral unprotected mine shafts. Dr. Foster said that as long ago as Feb. 5 last he wrote to Messrs. Stephens, Prance, and Jago, of Plymouth, the stewards of Mr. Trelawny, calling their attention to the shafts. Those gentlemen replied almost immediately that they had instructed Capt. Josiah Thomas, the agent of Mr. Trelawny, to attend to the work if the mine sett was not under grant. There were, in all, seven shafts, one in proximity to a public footpath, with a cottage within 30 yards. On June 2 they were still unfenced, and the summons was issued. Some of the shafts had no burrow to protect them, and the mouths were flush with the ground. Mr. William Tyacke, Inspector of Nuisances, said he knew the shafts, and, as far back as February, 1875, he called the attention of Mr. Trelawny's stewards to their condition. One was within 9f of the road, and a cottage where there were children was within 20 feet. Capt. Thomas said he was mineral agent of Mr. Trelawny, and a year and a half since had instructions to fence all the old shafts at Wheal Vor; 39 had been secured, and he understood that the shafts in question were in enclosed land, and not unprotected. He knew of no path being there. He should himself pay any fine that was inflicted, as it was not Mr. Trelawny's fault. Mr. J. J. Rogers chairmao, said the case was more one of inadvertence than wilful neglect, but the Bench felt that these cases were too numerous, and it was metenough that the work was attended to after summonses were issed. A fine of 5t. and costs would be inflicted. This case was etiently, as Mr. Rogers said, one of inadvertence, but the evil is that these inadvertencies have kept the Inspector from att re important matters.

more important matters.

Far more serious was the business to which Dr. Foster had to attend on Saturday, when an inquest was held on the bodies of two men named Old and Rowling, who were killed by a barrel falling on them in the shaft at Coombellack. The cause of the accident was a singular one. The rope with which the kibble was being bastel caught fire—it was at first thought through friction, but it was the result was a singular or a specific and the region. The hoisted caught fire—it was at first thought through friction, but it would now seem in consequence of a spark from the engine. The nature of the occurrence was clearly explained at the inquest by a young man named Date, who was working with Old and Rowling, heating the borer 42 fms. from surface at the time. Hearing a warning overhead he looked up and saw the barrel coming, and leaped to the other end of the shaft. Next he saw the two men under the timber, rope, &c., which had fallen down the shaft. He went up the ladder 2 fms. above, into the level, and rang to surface for assistance, and went below again to his dead comrades. Rowling was near the bottom of the ladder, quite dead. Wounds in his head and body caused death. John Old was also dead. His head was at open behind. The barrel, chain, and rope were all at the bottom of the shaft, near the men, and the barrel probably struck Old, when they worked far down there should be a penthouse overhead if the shaft communicates with the upper air. If they had been when they worked far down there should be a penthouse overhead if the shaft communicates with the upper air. If they had been working under a penthouse the men would, probably, not have been killed. Had been sinking in this shaft six months. Stones had fallen out of the kibble—none very large. Generally stood under the engine-shaft, part of the same shaft which was divided from top to bottom. Did not go into the plat while the kibble was going up; they were too far down. Heard that Rowling had been nighted they six months since by stones falling down on him. The

going up; they were too far down. Heard that Rowling had been injured there six months since by stones falling down on him. The kibble then hitched and partly upset.

Other witnesses were called, but nobody could tell how the rope caught on fire, and the only further material evidence was as to the daty of providing a penthouse. Capt. Nancarrow, the manager, said he considered the engine-shaft equivalent to a penthouse, because a cistern covered one-half and the ladder "sollar" a good deal of the rest, but the whim-shaft was open. Did not consider there was any danger to the men, neither did he think a penthouse necessary. Heard of Rowling's former accident. The men never complained. It would be safer if the men were under a penthouse, and it was his (witness's) duty to protect the men as much as possible. Would not put a man where he himself would not work. Did not know of any man complaining to him about the danger, but they had about want of casing, and then he had brought it down. Sme of the witnesses, however, said there had been talk about the danger, and, further, that it was the custom for the men to ride up in the kibble, and the jury, after deliberation, announced that they danger, and, further, that it was the custom for the men to ride up in the kibble, and the jury, after deliberation, announced that they were unanimous in finding a verdict of "Manslaughter" against Capt. Nancarrow, the manager of the mine. Capt. Nancarrow received the decision with great surprise. He was then, on the warrant of the Coroner, committed for trial at the assizes. Bail for his appearance was accepted. This is the first time under the Act any local inquiry has had so serious a termination.

The valuable work by M. Moissonet—"Observations on the Rich Parts of the Lodes of Cornwall"—which has been translated by Mr. J. II. Collins, F.G.S., will soon be published. Mr. Collins has undertaken the task of translation with the sanction and concurrence of the author, who has, moreover, added to his work several original

tains the most eminent names in the mineralogical world, and an important body of those interested in practical mining, for the book is at once thoroughly scientific and thoroughly practical.

REPORT FROM THE NORTH OF ENGLAND.

REPORT FROM THE NORTH OF ENGLAND.

June 21.—In reference to the Pig-Iron Trade of the North of England there has been little to report during the past few days. The amount of business done is undoubtedly large, all but a small proportion of the 180,000 tons being now produced every month going into consumption in one form or another. But prices are extremely unremunerative. Makers say it is quite impossible to produce iron at a profit, and all the attendant conditions of the trade appear to justify this conclusion, notwithstanding the reductions that have recently been made in the wages of miners and blast-furnace men throughout the district. On Tuesday pig-iron was quoted at Middlesborough Exchange from 3d. to 6d. per ton less than the figure for the previous week. The price ordinarily quoted for No. 3 is now 41s. 6d., but in some cases sales have been made at a lower figure. In most respects the condition of the trade is quite the same as it was a week ago.

Messrs. Bolckow, Vaughan, and Co., have just blown in two of their new furnaces at their Eston Steelworks. The furnaces are 74 ft. high and 23 ft. bosh. They are each capable of producing about 400 tons of pig-iron per week. The company do not intend in the meantime to make steel ingots, and hence they are not hastening the completion of their steel works.

in the meantime to make steel ingots, and hence they are not hastening the completion of their steel works. They do, however, intend to make Bessemer pig-iron, and sell it to continental steel manufacturers, and for this purpose they have accumulated a stock of over 100,000 tons of hematite ore from their mines in Spain. The works are admirably situated and well laid out. It is expected that they will, when finished, afford employment to over 1000 hands. The recent award of the umpire appointed to deal with the question of wages in the ironstone mining district of Cleveland has given much dissatisfaction to the miners. At North Skelton a number of the hands have struck work, but this error is likely to be repaired through the mediation of the Executive, who are urging that however arbitration may result, the men, after having once consented to abide by it, cannot be justified in running away from their bargain. At all the other mines in the district the men continue to work, and average quantities of stone are being got out.

average quantities of stone are being got out.

The Coke Trade is just a little disturbed by the pending proceedings relative to the wages of the cokemen. The Court formed to deal with this question will assemble at Newcastle to-morrow. Sir James F. Stephen sitting as umpire. The duration of the proceedings will be limited to two days. The issue to be determined is whether there are any special circumstances that should entitle column to either a greater or a less reduction than the 6 per cent. cokemen to either a greater or a less reduction than the 6 per cent. accepted by other surface labour about the Durham Collieries. It appears that the decision will affect the status of the cokemen for the time to come, and as they consider themselves superior to other surface abour they attach a great deal of importance to the impediate a labour they attach a great deal of importance to the

impeding award.

The Finished Iron manufacturers in the North of England have given notice of their intention to apply for a reduction of 10 per cent. in the wages of millmen and puddlers. The wages of these men have not been disturbed since the beginning of last year, when Mr. Mundella, M.P., and Mr. Edward Williamsawarded a reduction Mr. Mundella, M.P., and Mr. Edward Williams awarded a reduction of 7½ per cent. Since then the trade has undoubtedly gone from bad to worse, the production of rails alone having fallen from nearly 30,000 tons to some 7000 tons per quarter, while prices have also largely fallen off. The men are proposing to continue the present arrangement for six months longer, but in the seriously depressed condition of the trade it is hardly likely that any such proposal will be accepted. The matter will, however, be referred to the Court of Arbitration appointed to deal with such matters in the finished iron trade. No new orders of any consequence have recently hear ulgard. trade. No new orders of any consequence have recently been placed in the Cleveland district, and many of the mills and forges are absolutely starving for work. Prices are cut as fine as they can be, and still North of England makers find it extremely difficult to enter into successful competition with the South Wales district.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

June 21 .- The Finished Iron Trade is still very languid. And the recent unfavourable reports of limited ironmaking concerns have had anything but an encouraging influence upon the market. They have, however, tended to strengthen prices here and there, ironmasters declaring that they will not continue to take orders at a loss. District engineering firms and such like people are just now the principal customers. Foreign orders are increasingly scarce. The new business at the mills and forges is mainly upon tank, and believe and the general run of sheets. The new business at the mills and forges is mainly upon tank, and boiler and girder plates, angles, strips, and the general run of sheets; 8l. will still secure a ton of galvanising sheets. Tank sheets cut to sizes are selling at a little over 8l. The demand for pig-iron is very limited, yet stocks in buyers' hands are large. The production is much in excess of requirements, and there are reports that two more furnaces will be blown out at the end of the quarter—one at Pensnett and another at Dudley, belonging to firms who have hitherto commanded a good merket for most of their makes: 4l. 5s. to 4l. 10s. is still quote i for all-mine hot-blast qualities, but considerable underselling exists. The iron of other districts stoutly competes with the Staffordshire product. Ironstone, even of a high quality, is plentiful. The best Robins Ironstone is selling at 17s. and 16s. Some holders, however, quote 18s. Coal is not in greater demand either as to furnace or forge sorts. The tade is now very unprofitable, and although many of the colliery owners in the Thin coal district have got their colliers to accept lower now very unprofitable, and although many of the collery owners in the Thin coal district have got their colliers to accept lower wages, yet they themselves are not benefited, for consumers demand that the difference should be almost entirely in their favour. Large collieries are standing from want of demand. The Sandwell Park Company have notified ironmasters that they are prepared to supply them with fuel by canal at rates which may be obtained on application at the colliery.

supply them with fuel by canal at rates which may be obtained on application at the colliery.

A somewhat novel and very good proposal is being made to a few medium and inferior pig-iron makers hereabouts. It comes from certain first-class vendors of blast-furnace requisites, and is that instead of monetary payment their customers should supply them with pigs delivered at the present works' price to the value of the debt. The sellers of the raw materials intend to stock the pigs until they can sell them again at a substantial profit. If the arrangement should be carried out the production of pig iron would be stimulated, as would also the consumption of the raw materials.

On the Stock Exchanges a slight strengthening is manifest in the Sandwell Park Company's shares. Sellers quote 17t., but buyers hold off at 15t. 10s. No transaction has taken place since my last. Cannock and Huntington and Hamstead property is still falling, the shares of the former being quoted at 3½ dis., and of the latter at 3½ dis. The Spon Lane Colliery remains at 5 dis., and sellers of the Pelsall Coal and Iron at 10 dis. The 20t.—14t, paid—shares of the Patent Nut and Bolt Company have sold at 7§ prem., and the 20t.—14t, and the 20t.—14t.

Pelsail Coal and from at 10 dis. The 20th—14th paid—shares of the Patent Nut and Bolt Company have sold at 78 prem, and the 20th—half paid—shares of the Patent Shaft Company at 1/8 dis.

The arbitrators under the Mines Drainage Act hold two meetings at Wolverhampton to-morrow, when they propose to make a draft award for the Old Hill district, and a similar award for the Bilston district. The rate required in the first district they estimate at 3.1. per ton for limestone and fire-clay, and 6d. per ton for ironstone, coal, slack, &c. In the Bilston district it is proposed to levy the maximum rates on all minerals raised.

In North Staffordshire the condition of the Coal and Iron Trades has not improved. Finished iron orders are scarce, pigs are diffi-cult of sale, the market is overstocked with ironstone, and coal is

and consequent depreciation in stock, short hours of labour, and foreign competition. He believed almost every ironworks and colliery in the kingdom had been a victim to the bad state of affairs, which he attributed to the bad advice given to the working classes. The depressed state of trade was, he believed, in a great measure due to the rash counsel of such gentlemen as Mr. Macdonald. Many orders executed by Belgian manufacturers would have been given to English could the latter have accepted them without inserting a "strike clause." Mr. Macdonald's statement that England was not suffering from competition was, he thought, refuted by the fact that orders were now going to Germany. The company had received from one of its former customers a letter stating—"We can buy iron bars from Germany at 61. 10s., whereas your list shows 9/s. 10s." Other speakers confirmed the remarks of the Chairman, and the report was adopted. and consequent depreciation in stock, short hours of labour, and

THE DARLASTON STEEL AND IRON COMPANY.—Three meetings THE DARLASTON STEEL AND IRON COMPANY.—Three meetings of shareholders, creditors, and debenture-holders of this company were held, on Tuesday, at the Great Western Hotel, Birmingham, by order of the Master of the Rolls, for the purpose of ascertaining the views of the various parties with reference to the proposed reconstruction scheme. Mr. A. E. Wenham, in his capacity of official liquidator, presided. The new scheme has already been approved at a meeting of the company. The new company is to be incorporated under the name of the Darlaston Coal and Iron Company (Limited), with a capital of 150,000%, divided into 15,000 shares of 10% each. Debentures of the new company are to be issued in the principal of the existing debenture-holders, bearing interest at 5 per cent. At each of the meetings it was resolved: "That the meeting approves of the arrangements embodied in the heads of the proposed reconof the arrangements embodied in the heads of the proposed reconstruction scheme now submitted to the meeting and signed by the Chairman, and requests and authorises the Chairman to take such steps as he may be advised to be necessary or desirable for carrying out the same in its present form, or to such modifications or altera-tions as the committee may deem just."

REPORT FROM DERBYSHIRE AND YORKSHIRE.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

June 21.—Business is far from being good in Derbyshire, and there are just now more complaints than usual as to the quietness which prevails in both mining and manufacturing. At the lead mines the men are working steadily, but the production is far below what it ought to be, and there appears to be no spirit of speculation the same as we find in most other lead districts. Mining officials, as well as owners, do not set themselves out for forming companies for the taking of concerns that do not pay, but which could probably be floated by alluring prospectuses, and flaming reports from managers that can always be purchased. There are, however, mines now standing that there is very little doubt could be made to pay by ordinary perseverance, application, and the necessary capital. The collieries have not been so well employed as they were, and at several of them the men are employed little more than half time, whilst several small concerns are not working to a profit. From

several of them the men are employed little more than half time, whilst several small concerns are not working to a profit. From some places the trade with London keeps up very well for the season, but the consumption has fallen off considerably since the warm weather set in. Steam coal, however, is in rather better request.

The North Wingfield Colliery Company have reached the "Ell coal" at their colliery near to Chesterfield, and have found it to be 5 ft 3 in. thick, although at the other colliery in that Locality where the same seam is being worked it varies from 2 ft. 3 in. to 2 ft. 10 in. The bed is the same as that worked at Grassmoor, and is of good quality. At Mr. Holdsworth's colliery adjoining, however, the seam is 3 ft. 6 in, and increases in thickness until it reaches the new shaft of the Whittington Company.

Very little alteration has taken place in the Iron and Steel Trades of Derbyshire, but with regard to the former in particular there is plenty of room for improvement. The production of pig goes on much as usual, but the demand is quiet. Some of the foundries are doing tolerably well, but the trade is what may be termed as very uneven.

In Sheffield some few houses are rather better off, but the great majority are in the same state as they have been for some months past. The ordinary ship and plate mills are the reverse of active, and there is no push with respect to any of the others. Some of the crucible steel makers are a little busier, and for some descriptions of goods for the colonies more is be ng done. The principal business done in the best qualities of table cutlery is for the home markets, for American orders are still few and small. The foundries are not so busy as they were a few months ago, but the makers of malleable iron and castings have been doing tolerably well. The collieries in the district are not doing quite so much, except in steam coal, and there is every probability of less being done. Two or three of them sending to the Metropolis up to now have been doing tolerably well, but even their prices have recently come down 1s, per ton, and in all likelihood will be still lower. In other parts of the South Yorkshire district trade is very dull, and at one large foundry for the first time the men bave been put on short time, and several discharged. Bessemer steel, too, is not in such good request as it was earlier in the year. At Carlton, and several other places, men are busily engaged in opening out the coal, so that before very long we shall be in a position to return some hundreds of thousands of tons yearly more than we are at the present time. Just now, with some thousands of miners on strike in the country, and many working short time, a much larger quantity of coal is being raised than markets can be found for. What it will be in a few months more, should all be at work, with the vast increase in the production, it is not easy to say. One thing, however, is evident, that there is little probability even of the present price of coal being maintained, and no doubt wages will follow in the same direction. In Sheffield some few houses are rather better off, but the great

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

June 21.—There is little or no change to be noted in the Iron
Trade, and although clearances are well maintained prices continue
very low for finished descriptions. The Belgians can make common
iron bars much cheaper than they can be manufactured in this distriet, and consequently many of the orders which should come here
go to Belgium. At the same time this district gets a good share of
what orders are placed in England. For rails there is still a fair
demand at, however, almost unremunerative rates. Pig-iron is still
selling at prices in favour of buyers. Clearances of iron have been
well maintained during the week, and have been to the Baltic ports,
Canada, India, and Newfoundland, as well as a large parcel to Cadiz.
Tin-plates show a little more animation, and in some instances
slightly enhanced prices have been obtained. Shipments have been
made to France during the last few days. With the restriction in
make, and considering that several establishments are closed, there

made to France during the last few days. With the restriction in make, and considering that several establishments are closed, there is a probability of ar improvement.

In the Coal Trade the main topic of conversation has been the crisis which is impending. Colliery proprietors naturally feel strongly on the matter, as by the course taken by the Committee of Control of the Aberdare and Plymouth Company they are placed at a great disadvantage. While this company can sell ceal at 10 per cent. less than them they are bound down by the sliding scale to pay the minimum wages under the award, which they cannot terminate except by giving six months' notice. It is contemplated, therefore, to give this notice, but then it will be six months before coalowners can compete with the company named, and the other therefore, to give this notice, but then it will be six months before coalowners can compete with the company named, and the other companies who have followed its example. It is feared that the Masters' Association—a powerful and influential organisation—will be broken up. The Association requested a deputation, consisting of its Chairman, Sir George Elliot, M.P.; and D. Davies, M.P.; and Mr. Dixon, to wait upon the syndicate of bankers who control the company, but the latter have declined to receive it. Thus matters stand. The colliers in the employ of the company view with satisfaction the fact that they have enlisted on their side the sympathies of such gentlemen as those above named, and some of them are desirous of giving notice to terminate contracts; no doubt if they do In valuable work by M. Moissonet —"Observations on the Rich Parts of the Lodes of Cornwall"—which has been translated by Mr. J. H. Collins, F.G.S., will soon be published. Mr. Collins has undertaken the task of translation with the sanction and concurrence of the author, who has, moreover, added to his work several original notes. As the edition is limited to 400 copies, and the work will contain many valuable plates and diagrams, it is very desirable that the year's working had resulted in a loss of 14,072/L lös. 5d. these who wish to secure a copy should take time by the forelock, and place themselves on the list of subscribers, which already con-

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the district are holding meetings, and in several instances have rethe district are holding meetings, and in several instances have resolved to assist their fellow-workman if they resist the reduction To some extent the men in the Ogmore Valley, who are on strike against a reduction of 10 per cent, have been assisted. The foreign demand for coal has been well sustained during the week; in fact, shipments have slightly increased. House coals are very quiet, but there is a little more business doing in patent fuel. A trial of a patent apparatus for utilising anthracite coal has recently taken place on board the Balmoral steamer from Swansea, which demonstrates the value of this coal as fuel for marine boilers. It was proved that the use of the coal not only ensures a quick passage, but that that the use of the coal as fuel for marine botters. It was proved that the use of the coal not only ensures a quick passage, but that the saving in quantity used was great, compared with other coal. The smokeless character of the fuel is also valuable, as it might probably be used with advantage on board ships of war. Further experiments by the protocologistic the process.

riments by the patentees will take place.

The flooding of the Lower Tir Philkins Colliery, Pontllanfraith, the property of Messrs. W. and H. Powell, is announced. A sudden influx of water occurred in the workings where the men were driving a hard heading. The water has gained rapidly, and although pumping has been resorted to it does not abate. About 150 men and boys are thrown out of employment by this mishap. It is believed that the water from the Sirhowy river is finding its way in

through a fault.

The case of Mr. Benjamin Thomas, underground manager at the Weigfach Colliery, to which I alluded last week, has been re-heard. He was fined 20%. In March last, it will be remembered, 18 men lost their lives in this pit. At a meeting of colliers (employed at the pit, and another one under defendant's care), held on Saturday, the men expressed their confidence in Mr. Thomas, and passed a resolution to the effect that they considered he had performed his duties carefully and efficiently, and regretted that proceedings should be taken against him. be taken against him.

be taken against him.

Some time ago the sale of the Cwmavon Works, Glamorganshire, was announced in these columns. Steps are being taken to subdivide the huge concern into three or four establishments, and it is hoped that some of the old employees will again be engaged. Messrs. Shaw and Thompson, both well-known metal brokers of London, are acting on behalf of the purchasers.

TRADE OF THE TYNE AND WEAR.

TRADE OF THE TYNE AND WEAR.

June 21.—The coal and iron works have been well employed of late, and the shipments of the staple products of the district—coal, coke, pig-iron, chemicals, &c.—have been considerable. Looking at this, and also at the large mineral traffic on the North-Eastern Railway, it would hardly be considered that the times are so bad as generally represented. Competition, however, is very close, and it is evident that any increase in the demand will cause increased output of coal immediately from pits which have only been stopped until better times arrive. So long as this continues, only works favourably situated can earn any profits of consequence. The Alexandrina Pit, a large new work belonging to the Earl of Durham, has been re-started after having been stopped some time. All the Northbeen restarted after having been stopped some time. All the North-umberland collieries have been worked pretty regularly since the termination of the strike, and most of the works in Durham have also been well employed. It is remarkable that there appears to be no dread whatever of the war in the East at present; that feeling has almost entirely pa-sed away as it is considered that there is no danger of it spreading to any other nations except the present com-The close of the war, however, would be hailed with much satisfaction, as this would no doubt give an impetus to the coal and iron and chemical trades. The advance in chemicals has been well sustained, and shipments have continued steady, stocks are not large.

so that good employment is expected in most branches of this trade.

The Iron Trade is generally described as extremely dull, but the make is very large, and it is not pretended that stocks are accumulating. A good business is done, with exactly the same results as those referred to in the coal trade, and only those works favourably situated as to position, and those who produce their own materials, as coke, &c., can make profits of any consequence. It is clear that either the demand must still further increase to a considerable exeither the demand must still further increase to a considerable extent, or some furnaces must be blown out to bring the business into a healthy state. The pig-iron sold for the last half-year will, it is expected, exceed by 30,000 tons the quantity sold in the first half of 1876. The Spanish one trade is becoming an important one here; st-amers and sailing vessels are glad of a return cargo from the coast of Spain. This ore, which is of high quality, is partly consumed here, but considerable quantities are sent to Sheffield and other districts for the manufacture of Bessemer steel. Iron shipbuilding continues very brisk, and founders are also very busy.

A special meeting of members of the North of England Institute of Mining and Mechanical Engineers was held on Saturday, the main

A -pecial meeting of members of the North of England Institute of Mining and Mechanical Engineers was held on Saturday, the main object of which was the consideration of the proposed alteration of the rules by the formation of a new class of members. It had been originally suggested that the members should be divided into fellows, members, honorary members, and students, but an amendment was carried by a large majority that the titles of the classes be members, associates, honorary members, and students—the alteration to be prospective, and not to affect existing members. A paper was then read by Prof. A. S. Herschell on "A. New Hand. Gear, assisted by Steam, for Starting and Reversing Winding-Engines, used in Belgium." The paper was the result of observations during a late visit to Belgium. A hearty vote of thanks was passed to the author of the paper. author of the paper.

Newcastle College of Physical Science.—A meeting of the governors and friends of this college was he'd in Newcastle on Friday to hear the result of the terminal examinations, and to dis-tribute the prizes. There was a large attendance of ladies and gentlemen. An address of a very interesting and suggestive kind was made to the students and those assembled by the Dean of Durham. It appears that some of the students have made good progress, and have distinguished themselves, but that the honors obtained arconfined to a comparatively small number, and that the bulk of the students have hardly made satisfactory progress, the main reason assigned being that when they go to the college they have not been sufficiently prepared for the teaching of the professors by the school. assigned being that when they go to the college they have not been sufficiently prepared for the teaching of the professors by the school masters. The D-an remarked strongly upon this point, which is, of course, very important. He also pointed out that at some future period the students at the college should, after spending two years there, be in a position to proceed to some of the universities for the purpose of further culture in the arts and sciences. Mr. R. Can Ellison, in seconding the motion, made the remark, which is worthy of notice, that he hoped that the future generation of managers of factories and collieries would be able to utilise the waste products of the works. This process has already been commenced, but it is highly desirable that it should be carried out without delay. The great bulk of these products can be converted to useful purposes. great bulk of these products can be converted to useful purposes, such as bricks and road material, &c., and thus the landscape will not be obscured. Much valuable land will be saved for husbandry purposes, and the result will also be very great economy in the carrying on of the works.

CHEMICALS, MINERALS. AND METALS.—Messrs. J. Berger Spence and Co. (June 15).—Acetate of Lime, 9t. 10s. per ton.—Alumina: Alum, 9t. 15s. for loose lump; ground, 7t. 15s.—Aluminous cake, 4t. 10s.—Ammonia: Sulphate, grey, 19t. 5s.; best London white, 19t 10s.; muriste—white, 27t.; sal ammoniac, firsts, 45s.; seconds, 44s.—Acid. Tartaric, English, ground or crystal, 1s. 5t.; foreign. 1s. 4½d., crystals; oxalle, 5d.; sulphurie, 3t. 10s.—Bleaching Powder Acid., 1s. 6½d., per lb.—Arsenic: New Consols make 8t. 10s.—Bleaching Powder At 5t. 5s.; for the whole of the year 1877, 6t.—Litharge: Best flake, 24t.—Metallic Salts: Iron sults, green and rustycopperas, 5s.; in casks or tarreis, 60s.—Coppe Salts: Sulphate of copper, 22t. 15s.—Magnesis: Epsom salts, 3t. 5s.—Nitrate of Soda: 1s. 6d. to 14s. 9t.—Potash: Mariates, 80 per cent., at 6t. 8s. 6t. 1. 6t. p. Prusslate, yellow: 10½d.; chlorate, 9d.; bichrome, 4½d.—Soda: Cream caustic, 60 per cent., 11t. 7ts. 5d.; white, 60 per cent., 12t. 7s. 6d.; soda ash, 1½d. to 1½d.; soda crystals, 4t. 5s.; d carbonate, 11t.; salt cake, 2t. 15s.; Giauber salts, 2t 15s.—Sugar Clead: Brown, 26t.; grey, 30t 10s.; white, 3t. Brimone: Best thirds, 5t. 7s. 6d.—China-clay: 15s. f. o.b. Cornwall; "Rosemellyn," 24s.; "BM," 34s.—Iron Ore; 49s. for 70 per cent.—Pyrites: Spanish cupreous, 5½d.; non-cupreous, 5½d.—Phosphate of Alumina, 3t. os. 3t. 9t. 9t. per cent., 5t. 15s.—Iron: Middlesborough Pig. 1ron, No. 1, 47s. 6d.; No. 3, 42s. 6d.; No. 4 (foundry), 44s. 6d.; No. 4, 6ds. 6d.;

No. 5 (mottled and white), 64s, 6d. — Bessemer, No. 1, 70s.; No. 2, 67s, 6d.; No. 3, 65s., less 2½, p.c.—Scotch warrants, 53s. 9d.; Scotch, g.m.b., No. 1, 55s, 6d.; No. 3, 52s. net.—Copper: Chili bars, 69l.; B.S. ingot, 79l.; tough cake, 77l.—Lead: Best English soft pig, 21l. 5s.; German soft pig, 21l. cd.f., Liverpool or London—Spelter: Silesian, 20l. 10s.; English, 20l. 5s. on rails, makers' warrants—Tin: S raits, 68l.; Australian, 69l.; British, 7l.—Tin-Plates: Best charcoal, 26s.; charcoal, 25s.; best coke, 23s.; coke, 22s.—Tubes and Fittings: 75 to 77½ per cent.

WEST PATELEY BRIDGE (Lead) .- The Craven Cross vein in the 56 is steadily laproving as it approaches the ran of rich ore ground gone down in the bottom of the old surface workings; the vein is over 5 ft. wide, composed of barytes and spar, intermixed with patches of lead ore. The branch of the North Rake vein, in the patches of lead ore. The branch of the North Rake vein, in the level east of cross-cut from No. 2 shaft, has improved during the last few days; it is now more than 1 ft. wide, carrying a leader of lead ore, worth fully 5 cwts. per fathom; in the level west of shaft the lode is 2 ft. wide, worth 10 cwts of lead ore per fathom. The Discovery lode in the new shaft is between 2 and 3 ft. wide, producing 15 cwts. of lead ore per fathom, and promising for further improvement. The various other lodes maintain their former productiveness.

HULTAFALL MINING COMPANY .- A company under the above title has just been registered for the working of an immense deposit of mineral adjoining the Vieille Montagne Company's mines, in Sweden, which are now annually returning the largest quantity of blende and lead of any mines at present being worked. The Hultafall Mines have been inspected by Capt. Southey, of West Chiverton, whose report appears in our issue of this day. Capt. Southey values the lode in the bottom of the shaft at 150t, per fathom net for blende and lead, and on an entire of calls 40 term. the lode in the bottom of the shaft at 150*l*, per fathom net for blende and lead, and on an output of only 40 tons per day, and with one crusher at work he estimates the profit at 3800*l*, per month, to be increased of course as the property is opened and the dressing-floors extended. The country rock is granite, similar to those of the Vieille Montague, which have been working prosperously for 20 years past, and are now only about 50 fms. in depth. The deepest part of the Hultafall Mines is a little over 10 fms. in depth, and the lode has maintained an almost uniform size and character from the surface downwards. The company is divided into 12,000 shares of 5*l*, each, and with the practical management under which it is started we augur for it a brilliant future.

St. Harmon Lead Minng Company.—At the second general

St. Harmon Lead Mining Company.—At the second general meeting of shareholders, held at the offices on Thursday (particulars of which appear in another column), the directors' report and statement of accounts were received, and unanimously adopted. Mr. Kitto supplemented his report by pointing out on a copy of one of the plans recently distributed amongst the shareholders the various points of interest, also indicating in a similar manner the large amount of valuable work that has been executed since he was placed in charge of the mine. He further stated that the lode in the 35 fm. level west had improved since his report, and was now yielding good lead; also that he was perfectly satisfied with the result of the work done during the year, and that the capital of the company was, in accordance with his original estimate, fully equal to the work to be done in order to open out and develope a great mine—in fact, such as he quite believed and trusted this property would prove to be. A cordial vote of thanks to the directors and Mr. Kitto closed the proceedings. closed the proceedings.

closed the proceedings.

Benhar Coal Company — Defective Machinery. — At Glasgow, on Wednesday, John Murray, aged 16, was employed at the Benhar Coal Company's pits to attend to and brake wagons on an inclined plane; but the momentum often overcame the brake, and the had had to stop them by spragging the wheels with any wood at hand. In January, 1876, a sprag, a bit of paling rail, broke, the lad stumbled over the fragments, fell, and the wagon passed over and nearly severed his leg a little above the knee. The pursuer claimed 1000% damages, attributing the accident to the company's neglect to provide proper machinery to stop the wagons. When evidence had been partly led, the defenders agreed to pay 250% and expenses, which being accepted the case was stopped. expenses, which being accepted the case was stopped.

BRYN ALYN LEAD MINE (North Wales) .- The discovery of lead BRYN ALYN LEAD MINE (North Wales).—The discovery of lead ore made at this mine last week in the stopes over the 60 continues to improve. A vein of solid ore, 1 ft. in width, has been driven into for ten days, and the ore increases in quantity as the driving goes on, and a splendid deposit is left both in the roof and in the bottom of the level. Good ore was met with for 50 yards in this stope previous to this discovery. The 100 east is in a fine lode, 4 ft. wide, producing nice lumps of ore, and in a few days more driving it is expected that another valuable deposit of lead ore will be laid open in this level, even better than in the stopes. This mine is rapidly improving. rapidly improving.

WEST CRAYEN MOOR.—The prospects of this property continue to improve; we hear another 20 tons of lead ore is being got ready for the smelt mills. They are opening up a rich mine, as the reports prove. The workings are shell w, but as far as seen the ore ground holds down to a great depth. They have a spendid love in the Blackhill adit, and thus far have passed through it 17 fms, rich for lead all the way. leal all the way

COMBMARTIN MINE.—An important improvement has taken place during the past week. The part of the lode which was left standing by the former workers in the 37 has been taken down, and the level is now being driven into untried ground, where the lode is lng by the former workers in the 37 has been taken down, and the level is now being driven into untried ground, where the lode is worth fully 10 cwts, of silver-lead per fathom. The manager pronounce if to be the best lode he has ever seen in the mine, and it is the more importants-eing that it is going into undeveloped ground which can be worked without the sid of any other machinery than a horse-whim. Some fine specimens of the ore have been received at the London office of the mine.

FRONTING AND BOLIVIA .- All must admit that this company FRONTINO AND BOLIVIA.—All must admit that this company well de-erves the great success it is beginning to realise. Three years since, after having raised upon debentures 13,000%, the company were without funds, and the shareholders disinclined to subscribe further capital. Messrs. Restrepo and Sons (the company's bankers in Bolivia) advanced about 5000% on the mortgage of the mines, and immediately employed Mr. R. R. White, the present manager. Since that period Mr. White has paid out of the profits of the mines not only the 5000% due to the local bankers, and the debenture debt on this side, but to pay a dividend to the shareholders. When the revolution broke out—in June, 1876—a monthly profit of about 1200% was being realised; and, according to well-authenticated private information, such results may be shortly looked for as to place these mines, after a chequered career of 20 years, in that enviable position so confidently expected by their earliest supporters

GOLD IN RUSSIA.—In a recent work by M. Bogolubsky on Gold and Gold Mining in Russia, it is stated that the area of the gold mines in that country is a little over two millions of square miles. The yield is about 80,000 bs. in weight annually, this being equiva-lent to 3,000,000 sterling on an average. After deducting working expenses, this does not leave a very large sum for so large a tract

TO METAL MERCHANT

ACTORY TO LET, WITH GOOD

KERBEY STREET, POPLAR.

Apply to W. H. BASDEN, 93, Cannon street, London, E.C. WITH GOOD FURNACES,

WILLIAM FRANCIS, M. and C.E., 2. DERWEN VILLAS, MOLD. Over Twenty-five years' experience. Pupils received for a Course of Instruction in Surveying, Dialling, Levelling, Geology and Mineralog, —their practical application to the various branches of Metalliferous Mining Quarrying, &c. Terms on application.

INVESTMENTS.—THE BEST for LARGE or SMALL SUMS.

Profits last account vary from 35 to 100 per cent, on outlay. Like results may be relied on for June account by acting in one or two active stocks. Apply for list and particulars. Enclose stamp.

HUME AND CO., CROSBY HALL CHAMBERS, LONDON, E.C.

MESSRS. J. TAYLOR AND MINING ENGINEERS AND INSPECTORS. Sc. LONDON WALL. LONDON, E. C., Have Agente in England, Scotland, Wales, and on the Cont

M ESSRS. THORNYCROFT AND CO. FINANCIAL AGENTS AND SHARE BROKERS, 51, SOUTH JOHN STREET, LIVERPOOL.

REDUCTION OFFICER.

WANTED, to PROCEED to CENTRAL AMERICA, on the FEROUS ORES. Must have had at least two or three years' practical expension on a Gold Mine.

on a Gold Mine. Copies only of testimonials as to character and ability may be addressed as care of Mr. G. Street, Advertising Offices, 30, Cornhill, E.O.

SECRETARY WANTED.

SECRETARY WANTED.

WANTED, a GENTLEMAN, to TAKE the SECRETARYSIIIP

of a LIMITED COMPANY. One who could put some money in the
for Tin and Copper, and the mine is opening rich.

For particulars, address to "B.," MINING JOURNAL Office, 26, Fleet sites,
London, E.C.

WANTED,—THE ADVERTISER, an ASSAYER, last employed as Chemist and Manager in a Spelter-works, DESIRES an ENGAGE MENT. Has had experience of the extraction of gold, silver, and lead from ores; also would not object to go abroad. Speaks Spanish. Highest reference, Address, Mr. Thomas Bowen, Pentrich, near Derby.

TO IRON AND TIN-PLATE MANUFACTURERS

TO IRON AND TIN-FIBETS MANUFACTURERS.

WANTED, by a Firm well-known in Liverpool, and having a good connection, an AGENCY for a GOOD MAKE of TIN FLATES and MANUFACTURED IRON. Willing to make advances if required Address, "Metal," care of Messrs. Harvey, Alsop, and Stevens, Seliding,

TO MINING COMPANIES.

WANTED, a SITUATION as CLERK, by a Young Man, who is also able to dial, and keep up the plans of a mine. Good references, Address, "M." MINING JOURNAL Office, 26, Fleet-street, London, Ec.

WANTED, for a Lead and Copper Mine in active operation, situated in Wales, a PRACTICAL MAN as FOREMAN DRE-SER of SURFACE MANAGER. Must be thoroughly acquainted with dressing in chinery, and the manipulation of mixed ores.

Address, "T. B. P.," Post Office, Carnarvon, North Wales. WANTED, for an extensive COLLIERY, turning 6000 tons weekly, a GOOD COMMERCIAL MANAGER. One thoroughly to qualited with the duties of such an appointment, and of long experience.

Impetency. Address, with testimonials, full particulars of former employment, and sultequired, to "O. G.," MINING JOURNAL Office, 26, Flest street, London, E.C.

WANTED, TO PURCHASE, CALC-SPAR of superior quality.

Apply, Howard Thomas, Harford-street, Birmingham.

TO ASSAYERS, CHEMICAL MANUFACTURERS, &c. GERMAN GENTLEMAN, DR.PH., of great practices of experience, IS OPEN to ACCEPT an ENGAGEMENT in any branch to be addressed "Dr. B.," care of E. Schubert, Esq., 32, St. Swithin

TO IRON ORE MERCHANTS, AND OTHERS GENTLEMAN, residing in South Wales, IS OPEN TO SELL IRON ORES, on commission. Has a very valuable connection with all ron and steel producers, and is capable of pushing business. Can procuse scellent references. Address, "Iron Ore," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

METALLURGICAL CHEMIST, who is practically acquainted with Extraction of Metals by Wet and Dry Processes, and who could usertake the Erection of New Works, wishes to MEET with a SITUATION, sitter this country or abroad. Highest references.

Address, "B. D.," care of W. H. Smith and Son, Castle street, Liverpool.

MR AD DE KATOW, CIVIL AND MINING ENGINEER, of 14, BLURTON ROAD, CLAPTON PARK, E., has now OPENED as OFFICE at 94, GRACECHURCH STREET, E.C. Surveys, designs, plans, specifications, &c., and superintendence of all works connected with the profession promptly attended to on moderate terms.

Sale and Purchase of Mining Properties negociated (several now for disposit presenting unusual advantages). Engineering.

TO AGENTS OF MINES, AND OTHERS

MR. R. PASCOE, MINING ENGINEER, LAND SURVEYOR
AND GENERAL DRAUGHTSMAN (Fourteen years with JAMS HES
DERSON, Esq., C.E.) Mines surveyed or inspected, and faithfully reported on offrice -4, St. Mary's Street, Truro, Cornwall. A vacancy for a Pupil.

L O N I A L .. £2,0

Subscribed capital \$2,000,000
Paid-up 600,000
Reserve fund \$4,000
The Court of Directors of the COLONIAL BANK hereby give notice that in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of proprietors will be HELD at the Bank House, No. 13, Bishopeate street Within, E.C., or HIURSDAY, the 5th July, 1877, at two o'clock precise, to receive the report of the proceedings of the Corporation.

The Transfer Books of the Corporation will be closed on the 25th June, and reopened on the 9th July, 1877.

By order of the Court of Directors,
JAMES CLARK, Secretary.

13, Bishopsgate-street Within, E.C., 7th June, 1877.

Notice is hereby given, that the ORDINARY GENERAL METING of the company will be HELD at the City Terminus Hotel, Cannon-street, London, as WEDNESDAY, the 27th day of June next, at Two o'clock precisely, to recte and adopt the Directors' Report, and to declare a Dividend.

8, Tokenhouse yard, E.C., 12th June, 1877.

THE ALMADA AND TIRITO CONSOLIDATED SILVER
MINING COMPANY (LIMITED).

Notice is hereby given, that the FOURTEENTH HALF YEARLY GENERAL
MEETING of the above company will be HELD at 47, Finsbury Circus, Lorles,
E.C., on FRIDAY, the 29th day of June, 1817, at Twelve o'clock precisely, for the
purpose of receiving reports from the directors and manager, and transching the
ordinary basiness of the company. The Register of Transfers will be closed from
the 15th to the 29th instant, both inclusive.

By order of the Board,
H. G. DENNISS, Secretary.
No. 47, Finsbury Circus, E.C., the 15th June, 1877.

THE CAPE COPPER MINING COMPANY

(LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the Terminus Hotel, Cannon-sived, in the City of London, on WEDNESDAY, the 18th day of July next, at 750 o'clock in the afternoon, to receive the report and accounts for the year 1876, and

o clock in the attention, to receive the control of the control of

re-election.

Notice is also given, that the Transfer Books will be closed from the 4th to the 18th proximo, both days inclusive.

By order of the Board,

G, Queen street place, London, 22nd June, 1877.

THE ANGLO-AUSTRALIAN GOLD MINING COMPANY THE ANGLO-AUSTRALIAN GOLD MINING COMPAN

Notice is hereby given, that an EXTRADRDINARY GENERAL MEETING
of the Anglo-Australian Gold Mining Company (Limited) will be HELD at the
office of the said company, No. 8, Austinfriars, in the Gity of London, on MOSDAY, the 2nd day of July, 1877, at One o'clock P.M. precisely, for the purpose
on firming the following Special Resolution passed at an Extraordinary General
Meeting held on Monday, the 4th day of June, 1877:—

"That the Anglo Australian Gold Mining Company (Limited) be wound-up
voluntarily."

By Order, J. H. MURCHISON,
8, Austinfriars, London, E.C., 14th June, 1877.

THE YORKE PENINGULA MINING COMPANI (LIMITED).

Notice is hereby given, that the ANNUAL GENERAL MEETING of the Shareholders of the Yorke Peninsual Mining Company (Limited) will be HELD at the City Terminus Hotel, Cannon strest, London, on FRIDAY, the 29th of June rest, at half pust One o'clock afternoon precisely, for the purpose of transacting the usual business. And notice is also given, that on the said 29th day of June instant, and immediately after the termination of the business of the Annual General Meeting, a SPECIAL GENERAL MEETING of the holders of Preference Shares of the company will be held at the same place, for the purpose of approving of or otherwise resolving as to the creation and issue of additional Preference Shares by the company.

And notice is hereby further given, that on the said 29th day of June instant, and And notice is negery further given, that on the said 29th day of June instance, immediately after the termination of the business of the meeting last above methoded, a 8 PECIAL GENERAL MEETING of the Ordinary and Preference Sartholders of the company will be held at the same place, for the purpose of creating additional Preference Shares of the company.

1, King's Arms-yard, Moorgate-street, London, 19th June, 1877.

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If the Matter of the Eishwell Collieries (Limited).

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Matter of the Bishwell Collieries (Company are Recursed).

ME CREDITORS OF THE ABOVE—NAMED COMPANY are Recursed on before the 14th day of July, 1877, to SEND THEIR BERSES, and the Particular of the Interest of the Particular of Send Abores 1888 and the names and addresses of their solicitors (if any) to Edmund 1918, and the names and addresses of their solicitors (if any) to Edmund 1918, and the names and addresses of their solicitors (if any) to Edmund 1918, and the names and addresses of the Chancellor Sir Richard Malins, and 1918, and the solicitors, to COME in and PROVE THEIR SAID DESTES of the Chancellor Sir Richard Malins, and the side Chanders of the Vice-Chancellor Sir Richard Malins, and 1918, and 1918 and 1918

Dated this 8th day of June, 1877.

galed his sit day of June, 1877.

Galleitor for the Liquidator).

TAMAR VALLEY SILVER LEAD MINE,
In the parish of BEERFERRIS, and county of DEVON.

In the parish of BEERFERRIS, and county of DEVON.

In the parish of BEERFERRIS, and county of DEVON.

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In the with it's POWERFUL STEAM PUMPING ENGINE,
DRAWING MACHINERY, MATERIALS, TOOLS, and everything thereto belonging is TO BE SOLD, in consequence of the death of the late proto belonging is TO BE SOLD, in consequence of the death of the late proto belonging is to BE SOLD, in consequence of the death of the late prodelider. It has workings are on the main lody of the celebrated algebrouring old
difficulty. In the sealing of which dates centuries back, being last
self-sold the sealing the same history that Tamar Valley is altogether
difficulty in the sealing of the sealing the same highly approvable general character in
yame lold mines proved most abundantly productive. Besides being the
part Valley, it is precisely the same clay-slate formation; having been more or
yame of the last 12 months 'une extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the preproductive for over 70 fms. in extent at the three levels next above the pre-

MANGANESE LODE, 4 ft. big, has been cut on ASHWELL FARM, in the parish of LINKINGHORNE, near LAUNCESTON, CORN-L. The sett may be had by applying to Mr. RETALLACK, at the above-

Farm. set is situate about \$00 fms. east of the Old Tremallet Manganese Mine set is situate about \$00 fms. east of £50,000 worth of manganese has been and sold. It adjoins the main road leading from Five Lanes to Callington, didatant about four miles from the terminus of the East Cornwall Mineral

ay. olit lerel can be taken up and driven on the course of the lode, giving great of the working the mine without the aid of machinery. d June 20, 1877.

SILVER-LEAD MINE.—CAPITAL REQUIRED (about £200) to DEVELOPE this MAGNIFICENT MINING PROPERTY. Lodes can be inspected, and samples of the ores, rich in silver, taken at surface and underuil particulars, address—" X.," MINING JOURNAL Office, 26, Fleet-street.

YORKSHIRE LEAD MINES.

FULL PARTICULARS of the PRESENT and FUTURE PROSPECTS of the YORKSHRE LEAD MINES may be obtained on application to "A. B.," Post Office, Pateley Bridge, Yorkshire.

VERY VALUABLE MINES-SOUTH-WEST OF IRELAND.

EXTENSIVE AND RICH MINES OF SILVER-LEAD, L BLENDE, COPPER, &c., which require only to be drained of water in order to make immediate returns of ore. Any amount of machinery may be riven by water-power.

Capitalists will find this a safe and profitable investment; and reliable incapitains will find this a said and produced investment; and related in-formation may be obtained on application to Capt. W. Thomas, who has had early 40 years' experience in the management of Mines in Ireland. Cappagh Mine, Ballydehob, Co. Cork, May 28th, 1877.

DISCOVERY OF SILVER AT WHEAL NEWTON.—
The importance of this discovery may be seen by a perusal of the letter entitled "Holmbush and Wheal Newton," in this day's Mining Journal. The pive of the shares is now £4, and will be advanced as the parcels of silver come irward. A further dividend will be declared at the end of the current month. Investors may obtain full information through any respectable sharedealer, or on explication to our principal offices, 134, Palmerston Buildings, Bishopsgate-street, EMMENS and Co. (Limited), Mining Engineers and Manufacturing Chemists.

THE CLEDDAU VALLEY SLATE QUARRIES COMPANY (LIMITED).

Issue of 1500 Debentures of £10 each, bearing interest at 10 per cent., payable quartely, and redeemable at £11 per debenture by 30 half yearly drawings.
End debenture-holder will have one fully paid-up share of £5 assigned to him is each debenture be holds as a bous.
These quarries contain unlimited supplies of both green and blue slates of the highest qualities, and their situation is convenient to supply the best markets in a

Be tingion.
While nearly all other trades have been in a most depressed state the slate trade
has been most flourishing, the price of slates having risen about 50 per cent. within

two years.

Prospectuses, containing full reports on the quarries, and every detailed information, can be obtained from the company, 78, Coleman-street, London, E.C.

MALLEABLE IRON CASTINGS. Every Description.

W. B. MAPPLEBECK, JUN., 21 AND 22 LOVEDAY STREET, BIRMINGHAM.

FOR SALE, at NEW PEMBROKE MINE, CORNWALL.
BOLLERS.

An excellent 80 in. cylinder PUMPING ENGINE, with FOUR good 12 to

DILERS.

25 in DRAWING ENGINE, and TWO BOILERS.

26 in DRAWING ENGINE, and TWO BOILERS.

27 IN SPARE BOILERS.

27 IN SET IN STAMPS AXLES.

10 feathoms FLAT RODS, 3½ inch.

4 quantity of ROD PLATES and other MATERIALS.

Apply to Mr. JOHN POLKINGHORNE, PAR OFFICE, PAR STATION. FOR SALE, a 18-horse power PORTABLE STEAM ENGINE,

with link motion reversing gear, ready for delivery.

A25-hore power PORTABLE.

A15-hore power VERTICAL STEAM ENGINE, with link motion reversing

Ext., also gear to wind and pump.

A \$4. PAN MORTAR MILL, VERTICAL ENGINE, and BOILEB.

Apply to.

BARROWS AND STEWART, ENGINEERS, BANBURY.

GLASGOW AND THE HIGHLANDS. POYAL ROUTE VIA CRINAN AND CALEDONIAN CANALS, by ROYAL MAIL STEAMER, "IONA," DAILY, at Seven A.M., and from GREENOCK, at Nine A.M.
See bill, with map and tourist fares, free, at Messrs. Chatto and Windus, Publishers, 74, Plecadily, London; or by post from David Hutcheson and Co., 19, Hope street, Glasgow.

TO CAPTALISTS AND INVESTORS. TO CAPTALISTS AND INVESTORS.

M. R. R. TREDINNICK, DEALER in STOCKS and SHARES,
has special business and special information as to the true position and
historic value of the following Mine Shares:

Lead Hills.

Roman Gravels.

Demou Gravels.

Lianewst.

Investors confidentially advised by special appointment or letter
El, Bishopsgate-street, London, E.C.

CAPTAIN ABSALOM FRANCIS GOGINAN, ABERYSTWITH,

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WEST WHEAL GORLAND MINING COMPANY.—By the direction of His Honor the Vice Warden, Notice is hereby given that, on WEDNE'DAY, the 4th day of July next, at the Registrar's Office, at Turo, in the country of Cornwall, at Eleven o'clock in the forenoon, this Conrt will PROCEED to MAKE a CALL of SEVENTEEN SHILLINGS AND SIXPENOE PER SHARE on all the contributories of the said company settled on the List of Contributories as present members thereof.

All persons interested therein are entitled to attend at the time and place afore said to offer objections to such call.

CHARLES WILLIAM CLINTON, Official Liquidator.

Dated Stannaries Court Office, Truro, June 21st, 1877.

SLATE QUARRIES-NORTH AND SOUTH WALES.

MESSRS. MARSH, MILNER, AND CO., of 54, Cannon-street, London, have FOR BALE, BY PRIVATE TREATY, the following VALUABLE SLATE QUARRIES; and having regard to the fact that the DEMAND for SLATES at the present time FAR EXCEEDS the POSSIBLE SUPPLY, these properties, being of a non-speculative character, offer unexceptional advantages for the PROFITABLE UTILISATION of CAPITAL:—

NORTH WALES.—250 acres; lease, 43 years; dead rent. £15 per annum. Open quarry, recently developed. Splendid tip ground. Water power at command. Two miles from the level from railway to be extended nearly to quarry. Nine miles from Canarvon.

NORTH WALES ARERDOVEY.—Area, 300 perces. One mile

NORTH WALES, ABERDOVEY.—Area, 300 acres. One mile com a station. Good water power and machinery for large operations. Lease, 5 years; dead rent, £30.

NORTH WALES.—LLANLLECHID, near the Penrhyn Quarries.

Net profits about £2000 a year; capable of being greatly increased. No large
outlay required. Entirely free from pyrites. Area, 78 acres. Dead rent, £100 per
annum. Lease, 38 years.

SOUTH WALES.—30 acres; freehold. One mile from Rhyddowen station, near the Glogau Quarries in Carmarthenshire. Price, £2600; subject to royalty of 1-20th. SOUTH WALES.—LLANDILO, six miles from Narbeth, close to a station on the Pembroke, Tenby, and Whitland Railway. About 55 acres, including a good residence, with out offices. Slate has been proved of excellent quality. Price, £7500.

SOUTH AUSTRALIA.

EXTENSIVE and VALUABLE COPPER MINES, known as the

WHEAL BLINMAN AND YUDANAMUTANA,

Situate about 120 miles from Port Augusta.

BY ORDER OF THE TRUSTEES, FOR THE DEBENTURE HOLDERS.

MESSRS. BROAD, PRITCHARD, AND WILTSHIRE have been
favoured with instructions TO SUBMIT BY AUCTION, at the Mart,
Tokenhouse Yard, E.C., on Taesday, June 26, at One precisely, in One or more
Lots, the very extensive and valuable COPPER MINES, situate in SOUTH AUSTRALIA, about 120 miles from Port Augusta, and known respectively as

WHEAL BLINMAN AND YUDANAMUTANA,

Comprising about 1100 acres, together with the ENGINE FLOORS, HOUSES,

Comprising about 1100 acres, together with the ENGINE FLOORS, HOUSES, SMELTING WORKS, and all the FIXED PLANT as at present thereon. Maps and plans of the properties, with reports of Mining Engineers, may be inspected, and parti ulars and conditions of sale obtained at the Mart; of Messrs. Pattison, Wigg, Gurney, and King, Solicitors, 11, Queen Victoria street, E.C.; or of the Auctioneers, 7, Queen street, Chenpside, E.C.

ON MONDAY, 2ND JULY, 1877.

SLATE AND SLAB SAWING AND PLANING
MACHINERY.

MR. RABY WILL SELL, BY AUCTION, at Glen Helen, on
Monday, July 2, 1877, at noe o'clock in the afternoon, the MACHINERY
recently used at the GLEN HELEN SLATE QUARRIES, comprising Cutting,
Sawing, and Planing Machines, Button Saw, Cranes, Trucks, Saws, Shafting,
Pulleys, Water Wheels, and other Effects.

MINING PLANT, IN THE ISLE OF MAN. BRADDA MINING COMPANY. IN LIQUIDATION.

IN LIQUIDATION.

BE SOLD, BY AUCTION, on Tuesday, July 3, 1877, the PLANT and MACHINERY, at the Bradda Mine, consisting of a 45 in evilinder PUMPING ENGINE, condensing; 24 in. evilinder horizontal DRAW-ING ENGINE, high pressure; 24 in. evilinder ROPATORY ENGINE, for drawing and pumping, condensing; TWO 10 ton BOILERS; ONE 11 ton BOILER, CRUSHING MILL, 20 in rollers; 50 fms. 12 in. planger lift, complete; 10 fms. 5 in. drawing lift; 54 fms. 6 in. planger lift, complete; 15 fms. 7 in. drawing lift; 17 ms. 6 in. drawing lift; 2 crab winches, double and single grav; 100 fms. \(\frac{1}{2} \) in. chain, nearly new; smitts bellows and anvil; about a ton of miners tools, in lots; jigzing hutches and sleves; miners dial, by Wilson and Co; and sundry other articles.

Auction to commence at Twelve o'clock, and, in the meantime, the machinery may be viewed, and every information given, upon application to Capt. Barkell, the late manager, at Port Erin; or James Spittall, Solisitor, Douglas.

DING DONG MINE, NEAR PENZANCE.

POR SALE, BY PUBLIC AUCTION, on Thursday, 5th July next, at Four P.M., at the Office, Chyandour, near Penzance, the MINE, as a going concern, with the LEASES and PLANT, consisting of TWO PUMP ING, TWO WINDING, and ONE STAMPING ENGINE, with suitable PITWORK, and a large quantity of other materials.

The mine is in a full state of working, and may be viewed on any day previous to the sale on application to Capt. WILLIAMS, on the Mine; or the Purser, Mr. R. WELLINGTON, at Chyandour.—Dated 19th June, 1877.

WEST CALDER.

WEST CALDER.

VALUABLE SMALL MINERAL ESTATE.

TOR SALE, BY PUBLIC ROUP, in Dowell's Rooms, 18, George-street, Edinburgh, on Wednesday, 11th July, 1877, at Two o'clock, at a reduced upset price, THE ESTATE OF BROTHERTON, about 5 miles from Edinburgh, and 10 minutes walk from Newpark Railway Station, as previously advertised.

The titles, articles of roup, analyses of shale, &c., are in the hands of JAMES ROBERTSON, Solicitor, 4, Lindsay-place, Edinburgh.

THAT VALUABLE LEAD MINE, EDGE RAKE, and PLANT, in full working order (if not disposed of before, and notice given), TO BE SOLD, BY AUCTION, by Mr. PHILLIP REATON FIINT, on July 2nd, 1877, at the Mine, near TIDESWELL, DERBYSHIRE, two miles from Millersdale Station, Midland Railway.

All that EXTENSIVE MINERAL GROUND and MINE, with 12-horse horizontal ENGINE and BOILER, drum, ropes, pulleys, head stocks, ladders, ore crusher, horse gin, and all requisites for getting, drawing, and dressing lead ore—all in first-class condition. If not disposed of as a whole, the Directors will OFFER THE PLANT IN SEPARATE LOTS.

For particulars, apply to Mr. Thomas Eyris, Castleton, Derbyshire; or to Mr. C. R. GREGORY, Millersdale, near Buxton, Derbyshire.

LEAD MINE NEAR CARSPHAIRN, STEWARTRY OF KIRKCUDBRIGHT.

TO BE LET, for such number of years as may be agreed

THE WOOD HEAD LEAD MINE,
On the CRAIGENGILLAN ESTATE, situated in the Parish of CARSPHAIRN,
and Stewarty of KIRKCUDBRIGHT.
This Mine was opened in 1838, has been wrought ever since, and has yielded a large quantity of lead of the finest quality.
The Plant, Machinery, &c., can be had at a valuation.
JAMES M'CALL, at the Min-, will show the underground workings, as also the plans and sections; and for further particulars application may be made to ALEXANDER M'CUEBIN, Solicitor, Ayr; or to Mr. THOMAS SMITH, Land Steward, Berbeth Mains, Dalmellington, Ayrshire.
Ayr, 18th June, 1877.

HEMATITE IRON ORE ROYALTY,

AT MOOR ROW, BIGRIGG MOOR, NEAR WHITEHAVEN.

TO BE LET, BY TENDER, for a term of years, to commence from the 1st September, 1877,—

The IRON ORE under SEVENTY-FIVE ACRES of LAND at MOOR ROW, in the parishes of Cleator and Egremont, in the county of Cumberland, in the occupation of Mr. John Postlethwaite, of the Hollins, Whitehaven.

This Royalty is situate in the centre of the Bigrigg District, is bounded on the north west and south by mines of Messrs. Lindow, and on or towards the east by mines of Messrs. Ainsworth and Co. and Messrs. Burnyeat. Brown, and others, and in its immediate neighbourhood are other well-known mines worked by Lord Leconfield, Messrs. Lindow, John Stifling, Esq. and the Cleator Iron Ore Company, which latter company are sinking a plt adjoining a portion of the eastern boundary of the estate.

The royalty has been actively worked during the last twenty years, and large quantities of ore have been raised from shallow workings, extending over an area of about twenty acres. The present working shaft is in good condition, and is supplied with adequate engine power, and all necessary machinery and plant. It is connected with the Cleator and Egremant Railway by a branch line, and the metal can be tipped into wagons direct from the shaft.

The ore of the Bigrigg District is remarkable for its purity and high metallic yield, and commands the highest price.

Tenders must be endorsed "Tender for Moor Row Royalty," and will be received by Mr. Brown, Solicitor, 12, Scotch street, Whitehaven, up to the 2-th August, immediately after which date the taker will be declared. The lessors do not, however, bind themselves to accept the highest or any tender.

After the 18th June, conditions of letting may be had, and plans showing the royalty, underground workings, and adjoining mines, may be seen on application to Mr. Gronge Grex, M. E., New Lowter-street, Whitehaven; or to Mr. Brown, 12, Bootch-street, Whitehaven; or to Mr. Brown,

MESSRS. J. J. ARIS AND CO.,

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FOR DYNAMITE, LITHOFRACTEUR, GUN COTTON, &c. OF THE BEST QUALITY AND STRONGEST POWER, DELIVERED FREE IN LONDON.

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BANK CHAMBERS, SOUTH JOHN-STREET, LIVERPOOL; and 85, GRACECHURCH-STREET, LONDON,
E.C., MAN UF ACTURERS AND OR IG IN AL
PATENTE ES of SAFETY-FUSE, having been in
formed that the name of their firm has been attached to
fuse not of their manufacture, beg to call the attention of
the trade and public to the following announcement:—
EVERY COLL of FUSE MANU FACTURED by them has TWO SEPARATE
FORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as
THEIR TRADE MARK.

BENNETTS' SAFETY FUSE WORKS, ROSKEAR, CAMBORNE, CORNWALL.

BLASTING FUSE FOR MINING AND ENGINEERING PURPOSES,
Suitable for wet or dry ground, and effective in Tropical or Poler Climates.

W. BENNETTS, having had many years experience as chief engineer with Mesers. Bickford, Smith, and Co., is now enabled to offer Fuse of every ariety of his own manufacture, of best quality, and at moderate prices.

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LOCOMOTIVE TANK ENGINES

FOR MAIN LINE TRAFFIC, SHORT LINES COLLIERIES, CONTRACTORS, IRON WORKS, MANUFACTORIES, &c., from a superio pecification, equal to their first-class Railway Engines, and special.', \(\tilde{\text{perior}} \) and bear pour ves and heavy gradients, may always be had at a short notice from—

MESSRS. BLACK, HAWTHORN, AND CO., LOCOMOTIVE, MARINE, AND STATIONARY ENGINE WORKS, GATESHEAD-ON-TYNE.

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MANUFACTURE RAILWAY CARRIAGES and WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They
have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which
are constructed specially for shipping purposes. Wagons in working order maintained by contract. MANUFACTURERS also of IRONWORK, WHEELS, and
AXLES.

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MINING AND CIVIL ENGINEER,

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Has 24 years' experience in Mining and Smelting, and 10 years' experience in American Business and Law, offers his services at moderate charges for Reporting on Mining and other Property in any of the above-named States or Territories; gives correct, safe, and responsible advice as to securing full titles and possession; and, as to best mode of utilizing the property, will assist in settling existing difficulties by compromise, and in disposing of developed mining properties at home prices. As to care taken in reporting, reference is made to the Mining Journal Supplement, April 1, 1876, containing report on property of the Maxwell Land Grant and Railway Company; as to technical standing, to the prominent men of the trade—compare Moling Journal of Aug. 30 and Nov. 31, 1872, and New York Engineer and Mining Journal, Feb. 28, 1874.

TO MINING AGENTS, AND OTHERS.—An Independent Gentleman is in possession f FOURTEEN OFFICIAL PRINTED RAILWAY SHAREHOLDERS LISTS, comprising the principal Companies in "U.K." (all dated December, 1876). Any of the above can be HIRED, specially adapted for Distributing Circulars, Reports, &c. Address, "Shareholder," at C. H. May and Co.'s General Advertising Offices, No. 78, Graccchurch-street, E.C.

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ROISETH'S NEW AND REVISED MAP FOR 1875.—
Size 40 by 56 inches, scale 8 miles to the inch. Handsomely engraved, cotoured in counties, showing the Towns, Settlements, Rivers, Lakes, Railroads,
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principal Mining Districts adjacent to Salt Lake City, and location of the most pro
minent mines. Price, pocket form, 6s.

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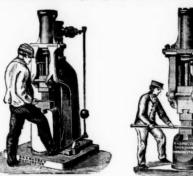
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Prize Medals—Paris, 1867; Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873; Scientific Industry Society, 1875; Leeds, 1875; Paris, 1875; Mancheser and Liverpool Society, 1876; U.S. Centennial, Philadelphia, 1876.

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HAMMERS STEAM

Of all sizes, from ½ cwt, to 20 tons, with self-acting or hand motion, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.







Steam Hammer for Heavy Forging,





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From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

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Of the simplest and best construction.

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Steam Engines

With Gear for Winding, Pumping, and Ore Crushing; also

Combined Mills and Engines,

WITH OR WITHOUT

BOILERS,

For Grinding Slag, Sand, Mortar, &c.

PORTABLE STEAM-ENGINE FOR SALE, 25-horse power; also 18 and 14-horse; both with or without pit-winding and pumping gear.

FOR SALE, an 18-horse combined vertical ENGINE, and BOILER.

Also a combined 6-feet PAN MORTAR MILL, and vertical ENGINE, with BOILER.

FOR SALE, a new 6 feet PAN MORTAR MILL, and a good second-hand 6-horse power por-table STEAM ENGINE.



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Bridge Section, 10 to 25 lbs. per yard. Flange Section, 16 to 70 lbs. per yard. **DH** Section, 50, 60, to 70 lbs. per yard.

Steel Rails, 30, 36, 54, 58, to 66 lbs. per yard. NEW PERFECT, NEW DEFECTIVE, AND SECONDHAND IN STOCK.

PERMANENT WAY RAILS, of all sections, made to order. For sections and price, apply to

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OVER 3000 OF THE RAILWAY TRUCK AND CARRIAGE SHUNTER now in use. (HESHUYSEN'S PATENT.)

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I RON AND STEEL RAILS, of all sections, from 10 to 82 lbs. per yard, new, defective, or second-hand.

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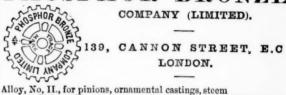
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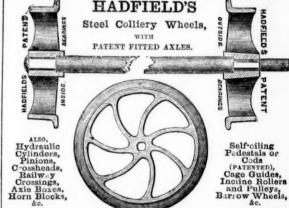
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